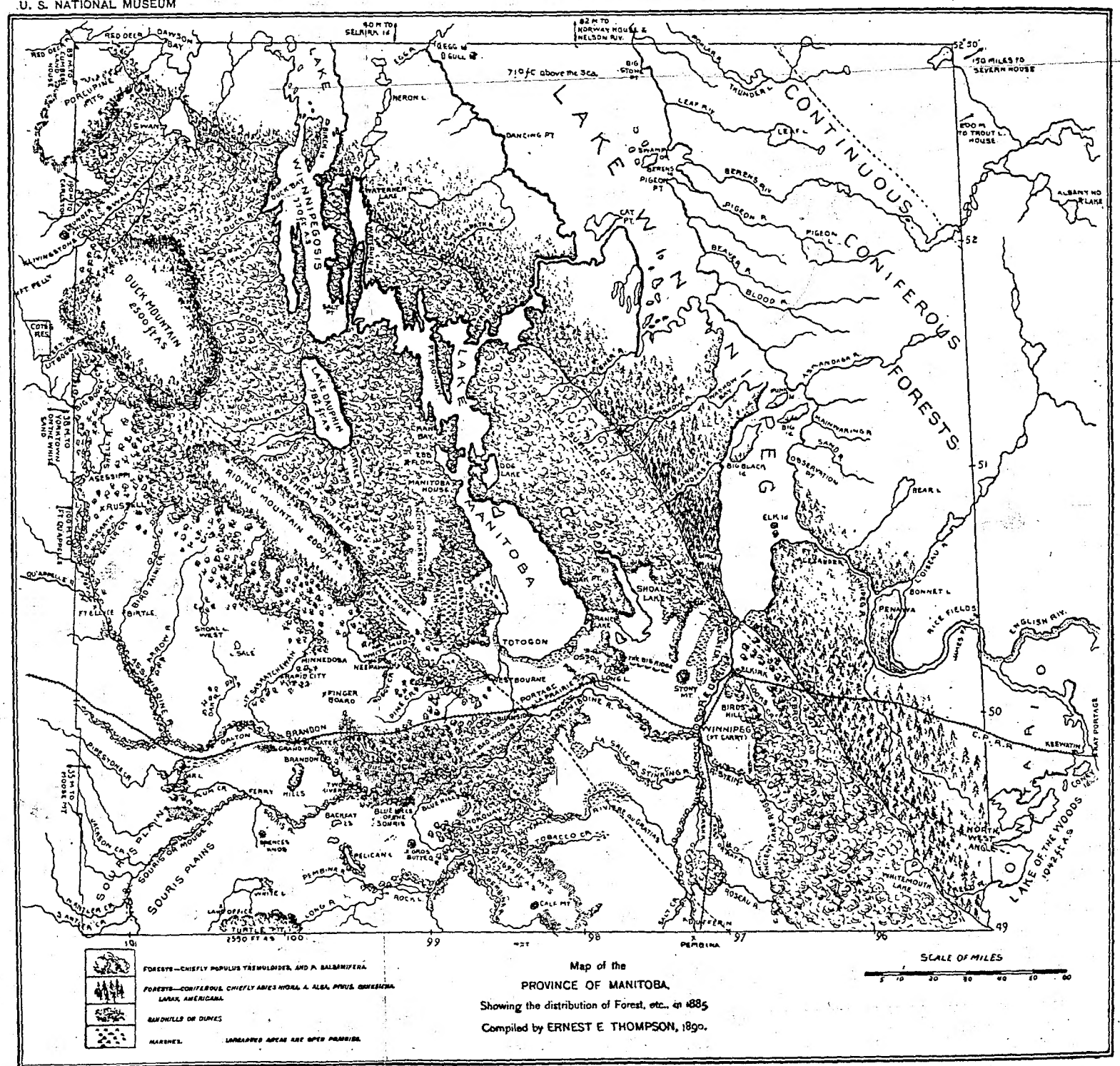

LAKE WINNIPEG
LAKE MANITOBA
LAKE WINNIPEGOSIS
LAKE DAUPHIN
CONTINUOUS CONIFEROUS FORESTS
SOURIS PLAINS
RIDING MOUNTAIN
DUCK MOUNTAIN 2500 FT. AS
PORCUPINE MTS
WINNIPEG
BRANDON
PORTAGE LA PRAIRIE
TOTOGON
MANITOBA HOUSE
SHOAL LAKE
ELKHORN
BIRDS HILL
STONY MT.
SELKIRK
GRAND VALLEY
DALTON
MINNEDOSA
RAPID CITY
NEEPAWA
BIRTLE
ST. ELIZIER
KRUSEL
ASSESSIPPI
SHOAL WEST
SALE
FINGER BOARD
WEST BOURNE
OSBORN
THE NARROWS
BIG BLACK I.
ELK I.
OBSERVATION PT.
MAINWARING R.
SAND R.
ASHDOWN R.
BEAR L.
BONNET L.
PENNAWA
RICE FIELDS
ENGLISH RIV.
KEEWATIN
LAKE OF THE WOODS
NORTH WEST ANGLE
WHITEMOUTH LAKE
ROSEAU R.
DUFFERIN
PEMBINA
PEMBINA MTS
PELICANS
GROS BUTTES
BLUE HILLS OF SOURIS
BACHELOR LS.
SPENCES KNOB
TURTLE MT.
CALF MT.
ROCK L.
WHITE L.
LAND OFFICE
TOBACCO CR.
RIVIERE QU'APPELLE
QU'APPELLE R.
ASSINIBOINE R.
SOURIS R.
LONG R.
ROLLING R.
DAUPHIN R.
VALLEY R.
SWAN R.
DUCK R.
BIRCH R.
WATERHEN R.
NERON L.
DANCING PT.
SWAMP R.
BERENS R.
PIGEON R.
PIGEON L.
PIGEON PT.
CAT PT.
BEAVER R.
BLOOD R.
LEAF R.
LEAF L.
THUNDER L.
THUNDER R.
BIG STONE PT.
EGG I.
GULL I.
RED DEER R.
DAWSON BAY
SWAN R.
DUCK MTS.
DUCK BAY
MINNEDOSA R.
SHELL R.
LITTLE SASKATCHEWAN R.
BIRD TAIL CR.
ARROW R.
SASKATCHEWAN R.
PINE CR.
BIG BOGGY CR.
SOURIS CR.
JACKSON CR.
SOURIS R.
SOURIS PLAINS
DOUGLAS
STONY R.
LA SALLE R.
ROSEAU R.
RIVIERE DES GRAINES
TOBACCO CR.
PEMBINA R.
ROCK L.
WHITE L.
LONG R.
CALF MT.
TURTLE MT.
2550 FT AS
DUFFERIN
PEMBINA
SALT LICK
CONT. 16
CONT. RES.
FT. PELLY
YORKTOWN
FT. ELLICE
FT. ORANGE
FT. ALEXANDER
FT. GARRY
FT. ALEXANDER
FT. ALEXANDER
FT. ALEXANDER



THE BIRDS OF MANITOBA.*

BY

ERNEST E. THOMPSON, OF TORONTO, CANADA,
Associate Member American Ornithologists' Union, etc.

(With plate XXXVIII.)

INTRODUCTION.

BOUNDARIES OF THE PROVINCE OF MANITOBA.

In treating of the birds of this region it seemed most convenient to make the political boundaries of the province, those also of the district included, though this is scarcely defensible from the scientific standpoint. According to the Revised Statutes of Canada, 1886, chapter 47, the boundaries of the province of Manitoba were fixed briefly as follows: On the south, at the forty-ninth parallel of north latitude, which is the international boundary line; on the west by a line along the middle of the road allowance between the twenty-ninth and thirtieth ranges of townships west of the first principal meridian, which line falls between 101° and 102° longitude west of Greenwich; on the north by the middle of the road allowance of the twelfth base line, which is north latitude 52° 50′; on the east by the meridian of the northwest angle of the Lake of the Woods which, according to Professor Hind is 95° 50′ longitude west of Greenwich.

In preparing my own map full use has been made of the maps pub-

*In offering the following observations in their present shape, *i. e.*, as they were made on the spot, without material condensation or generalization, I believe that I have taken not merely the best but the only right course under the circumstances. My original plan, as may be seen by the "notes" throughout, was to prepare something after a very old-fashioned model, but widening experience caused a considerable change of view. No one regrets more than myself their imperfectness, and, in some cases which I have pointed out, their unreliability. If I could see my way clear to revisit Manitoba in the near future I would gladly defer publication in the hope that I might first remove numerous doubts and fill many unfortunate blanks, but under existing circumstances there seems to be no course but to carefully revise my old journal and let it go forth for judgment.

My own observations are supplemented by those of numerous observers in various parts of the province, and I have also endeavored to include all available records relating to distribution and all valuable published matter relating to the ornithology of Manitoba that has not appeared in a special work on birds. This excludes only Dr. Coues's field notes * * * forty-ninth parallel, which, however, is constantly cited.

In all the records I have given the exact words of the writer are quoted.

Altogether I spent about 3 years in the province, my first visit extending from March 28, 1882, to November 16, 1883; my second from April 25, 1884, to January 27, 1885; my third from October 25, 1886, to January 12, 1887, broken only by occasional

lished by Professor Hind in 1860, by the Dominion Government in 1874, and by the Canadian Pacific Railway Company at various times between 1880 and 1890, also those drawn by Mr. Shawe for Phillip's Imperial Atlas, and those issued by the Tenth Census Report of the United States. I have also supplemented these by information gained in my own travels, as well as that supplied me by Messrs. Tyrrell, Nash, Macoun, Christy, and other observers.

PHYSICAL FEATURES OF THE PROVINCE.

The general features of the country have been ably and concisely described by Dr. Dawson in the report of the boundary commission (1875), as follows:

The first or lowest prairie level, is that of which the southern part lies along the Red River, and which, northward, embraces Lake Winnipeg and associated lakes, and the flat land surrounding them. A great part of its eastern border is conterminous with that of Lake Winnipeg, and formed by the rocky front of the Laurentian; but east of the Red River it is bounded by the high lying drift terraces surrounding the Lake of the Woods, and forming a part of the drift plateau of northern Minnesota. To the west it is limited by the more or less abrupt edge of the second prairie level, forming an escarpment, which, though very regular in some places, has been broken through by the broad valleys of the Assiniboine and other rivers. The escarpment, where it crosses the line, is known as Pembina Mountain, and is continued northward by the Riding, Duck, Porcupine, and Basquia Hills. The average height above the sea of this lowest level of the interior conti-

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expeditions outside of our boundaries. Carberry was my headquarters, and except where otherwise stated all observations were made at that place.

My companions, whose names appear, were Mr. Wm. G. A. Brodie, whose untimely death by drowning in the Assiniboine, May, 1883, robbed Canada of one of her most promising young naturalists; my brother, Dr. A. S. Thompson, with whom I lived, and Mr. Miller Christy. The last was with me during the latter part of the summer of 1883 and again for a few days in the July of 1884. He was the first ornithologist of experience that I had ever met, and I have to thank him for correcting in me many wrong methods of study that naturally were born of my isolation.

My thanks are due to Dr. J. A. Allen, of the American Museum of Natural History; Prof. Robert Ridgway, of the Smithsonian Institution; and Dr. C. Hart Merriam, ornithologist to the U. S. Department of Agriculture, for the identification of numerous specimens, and other assistance, and especially to the last for placing at my disposal the manuscripts of Miss Yoemans, Messrs. Calcutt, Criddle, Nash, Plunkett, Small, and Wagner; to Prof. John Macoun, of the Canadian Geological Survey; Messrs. Christy, Nash, Hine, Hunter, and Guernsey, for numerous manuscripts, notes, and much valuable assistance; to Dr. R. Bell and Mr. James M. Macoun, both of the Canadian Geological Survey; Dr. William Brodie, of Toronto; Dr. Charles Carpmael, of the Canada Meteprological Department, and Mr. Ernest D. Wentle, of Montreal, for help in various ways; and to the Hudson's Bay Company for access to the Hutchins manuscripts. Indispensable assistance in preparing the manuscript has been rendered also by my father, Mr. Joseph L. Thompson, and my cousin, Miss M. A. Burfield.

The measurements throughout are in English inches.

ERNEST E. THOMPSON,
86 *Howard street, Toronto, Ontario.*

JULY, 1890.

nental region is about 800 feet; the lowest part being that surrounding the Winnipeg group of lakes, which have an elevation of about 700 feet. From this it slopes up southward, and attains its greatest elevation—960 feet—at its termination far south in Minnesota. The edges of this prairie level are also, notwithstanding its apparent horizontality, considerably more elevated than its central line, which is followed by the Red River. Its width on the forty-ninth parallel is only 52 miles; its area, north of that line, may be estimated at 55,600 square miles, of which the great system of lakes in its northern part—including Lakes Winnipeg, Manitoba, Winnipegosis, Cedar, and St. Martin's—occupy 13,900 miles. A great part of this prairie level is wooded more or less densely, and much of the low-lying land near the great lakes appears to be swampy and liable to flood. The southern part, extending from the boundary line nearly to the south end of Lake Winnipeg, includes the prairie of the Red River valley, with an area of about 6,900 square miles; one of the most fertile regions, and, at the same time, the most accessible portion of the Northwest.

The superficial deposits of this stage are chiefly those of a great lake which occupied its area after the glacial submergence. This part of the interior of the continent being the last to emerge from the Arctic waters and having been covered for a long time afterward by a sea of fresh water, held back either by drift deposits or by rocky barriers, which have subsequently been cut through, and which must have united all the lakes now found in the region into one sheet of water, which extended with narrower dimensions about 200 miles south of the boundary line.

The Red and the Assiniboine Rivers and their tributaries have not yet cut very deeply into its alluvial deposits and its surface is level and little furrowed by denudation.

The second steppe of the plains is bounded to the east, as already indicated, and to the west by the Missouri coteau, or edge of the third prairie level. It has a width at the forty-ninth parallel of, probably, 200 miles, though it can not there be strictly defined. Its total area is about 105,000 square miles, and includes the whole eastern portion of the great plains, properly so called, with an approximate area of 71,300 square miles. These occupy its southern and western portions, and are continuous westward with those of the third prairie steppe. To the south, the boundaries of this region appear to become more indefinite, and in the southern part of Dakota, the three primary levels of the country, so well marked north of the line, are probably scarcely separable. The rivers have acted on this region for a much longer time than on the last-mentioned, and are now found flowing with uniform currents in wide ditch-like valleys, excavated in the soft material of the plains, and often depressed from 100 to 300 feet below the general surface. In these the comparatively insignificent streams wander from side to side, in tortuous channels, which they only leave in time of flood. The surface of this prairie steppe is also more diversified than the last, being broken into gentle swells and undulations, partly, no doubt, by the action of denudation, and partly, also, as will appear, from the original unequal deposition, by currents and ice, of the drift material which here constitutes the superficial formation. The average altitude of this region may be taken at 1,600 feet, and the character of its soil and its adaptability for agriculture differ much in its different portions.

The third or highest prairie steppe may be said to have a general normal altitude of about 3,000 feet, though its eastern edge is sometimes little over 2,000 feet and it attains an elevation of 4,200 feet at the foot of the Rocky Mountains.

Obviously none of the third steppe would fall within our limits were it not for a curious exception that is presented by the Turtle Mountain, which, though belonging to the third steppe, stands like an island upon the open sea of the second. Of this Dr. Dawson says:

Turtle Mountain, an outline of the third prairie steppe, is a broken, hilly, wooded region, with an area of perhaps about 20 miles square (400 square miles), and slopes

gradually upward from the plain around it, above which it is elevated, at its highest points, about 500 feet. It appears to be the culmination westward of the hilly drift region previously described, and forms a prominent object when viewed across the eastern prairie, from the contrasting somber tint of the foliage of its woods. From the west it can be seen from a distance of 45 miles, and when thus viewed has really much the general outline of a turtle shell. It is bisected by the forty-ninth parallel.

According to Mr. Tyrrell's map, the altitudes of the large lakes, etc., to the west have hitherto been given fully 60 feet too low; as, however, I am without corrected figures for other points whose altitudes are given, I have elected to let older computations stand, and they may be taken as relatively correct.

"*The sand hills*," so often referred to, are certain low sand dunes that cover a considerable extent of country in the vicinity of Carberry. They are in most cases low undulations rather than hills, are sparsely covered with grass and dotted over with beautiful clumps of trees, while the hollows and flats are diversified with lakelets that swarm with waterfowl and lower forms of life. The general appearance of the sand-hills country is quite park-like, and notwithstanding its unattractive name this region as a whole is the most pleasing to the eye and fuller of interest and varied pleasure for the naturalist than any other that I have seen in Manitoba. "*The Big Plain*" is an unusually level prairie extending from Carberry northward about 30 miles.

"*The White Horse Plains*" form a similar region between Shoal Lake and the Assiniboine.

"*The Souris Plains*" include the southwestern corner of Manitoba that is drained by the Souris River. This is a remarkably level region, entirely cleared of trees excepting in the river gorges, and diversified by numerous marshes and alkaline flats.

"*Bluff*" is, in Manitoban parlance, the name applied to any isolated grove of trees on the prairie. The term is never used here, as in the Western States, to mean an abrupt bank or escarpment.

Distribution of forest and prairie.—All that portion of Manitoba that lies to the eastward of the lowest prairie steppe, as above-defined, is a rocky Laurentian region full of rivers and lakes of fresh water, and thickly wooded, being within the limits of the great coniferous forest. A wide strip of the flat country lying to the westward of Lake Winnipeg, likewise the elevat d plateaus of Riding, Duck, and Porcupine Mountains, are also to be classed as parts of the northern forest. There is good reason for believing that at one time, not very remote, the rest of Manitoba was covered with a forest of aspens or poplars (*Populus tremuliodes*), slightly varied by oak (*Quercus macrocarpa*), spruce (*Abies alba et nigra*), birch (*Betula papyracea*), etc., which has been removed by fire, so that trees are now found growing only in such places as are protected from the fires by streams, lakes, marshes, or sandy tracts where so little grass grows that the fire can not travel; consequently, notwithstanding the prevalent idea of Manitoba as a purely prairie region, there is more or less timber in nearly all parts of the country as indicated on

the map. Thus I have endeavored to make a record of the distribution of forests in 1885, for evidently no natural feature is more likely to change in a few years than the extent of woodlands. The line limiting the coniferous forest on the south is copied from the forestry map issued with the Tenth Census report of the United States. It is suspiciously straight and even, but is doubtless correct when understood merely as a broad generalization. I regret that I am without the material necessary to define this limit more accurately. To the southward of Carberry is a small isolated forest of spruce that is known as the Spruce Bush or the Carberry Swamp, by which names it is herein referred to.

Water.—The province is plentifully, almost too plentifully, supplied with water. In addition to the numerous extensive lakes indicated on the map are thousands more of smaller extent, while the region of the Red River Valley in particular is diversified by vast stretches of marsh and lagoon. The various lakes are of two kinds, first the sweet water or live water lakes, fed and drained by living streams, teeming with fish and varying in size from that of a mere pond to that of Lake Winnepeg; second, the alkaline lakes, which are mere drainage basins and depend solely on evaporation for the removal of their accumulated waters.

They owe their alkaline impregnation not to anything of the nature of salt-bearing strata, but to the continual influx and evaporation of surface water very slightly impregnated with alkali through running over the prairies strewn with the ashes of the annual fires. These "dead waters" never, so far as I know, contain fish, but they are usually swarming with a species of amblystoma and numerous kinds of leeches and aquatic insects. These lakes abound on the prairies and in the sand hills, but are usually of very small extent. They have, I believe, several peculiar species of sedge, and are especially frequented by certain kinds of birds that seem to avoid the fresher waters, *e. g.*, Baird's Sparrow, Avocet, etc.

Salt springs, etc.—The following extract from Professor Macoun's well-known work on "Manitoba and the great Northwest, 1883," will prove an interesting item of physiography:

> Lying farther south [than the Silurian], and possibly underlying the greater part of the western side of the Manitoba Plain, is the Devonian Series. These rocks are known to be largely developed on both sides of Lakes Manitoba and Winnepegosis. Numerous salt springs are found in connection with them, and during the last summer the writer saw salt springs and brooks of strong brine flowing from them in various localities at the head of Lake Winnepegosis. The subjoined list of salt springs known to occur on Lakes Manitoba and Winnepegosis may tend to excite interest in these extensive deposits:
>
> 1. Crane River, Lake Manitoba.
> 2. Waterhen River, Dickson's Landing.
> 3. Salt Point, east side of Lake Winnepegosis.
> 4. Salt Springs, Winnepegosis.
> 5. Pine River, Winnepegosis.
> 6. Rivers near Duck Bay.

7. Turtle River, Lake Dauphin.
8. Swan or Shoal, two localities.
9. Salt River, flowing into Dawson's Bay.
10. Numerous salt springs and bare, saturated tracts of many acres in extent on Red Deer River, which flows into the head of Dawson's Bay, Lake Winnepegosis. For 10 miles up this river salt springs are quite frequent, and excellent salt was collected in three places, where it formed a crust on the surface of the ground. Some springs were examined where a respectable rivulet of strong brine issued from them, as clear as crystal, and evidently quite pure. All the springs and marshes seen were bordered with seaside plants, and one of them, which has never been found from the seacoast before in America, was found in abundance. The plant referred to is Sea-Side Plantain (*Plantago maritima*).

The following extract from Professor Hind's report (1858) shows that this line of saliferous strata goes right across our province:

Near and west of Stony Mountain many small barren areas occur, covered with saline efflorescence; they may be traced to the Assiniboine, and beyond that river in a direction nearly due south to La Rivière Sale and the forty-ninth parallel. These saline deposits are important, as they in all probability serve, as will be shown hereafter, to denote the presence of salt-bearing rocks beneath them, similar to those from which the salt springs of Swan River, Manitoba Lake, and La Riviére Sale issue.

Meteorology.—I have not been able to obtain the material necessary for a general chapter on the meteorology of Manitoba, and must content myself with a few statistics taken from Professor Bryce's article on Canada in the Encyclopædia Britannica.

The mean annual temperature for 11 years (1871-1881, inclusive), taken near Winnipeg, was 33.06°, the maximum 95.34°, the minimum —40.51°; the mean amount of rain, 16 977 inches; the mean amount of snow, 52.72 inches; the mean total precipitation of rain and snow, 23.304 inches; the mean height of the barometer, 29.153. The mean average temperature for the years 1880 and 1881 was as follows: January, 2°.9; February, 3°; March, 9°; April, 30°.2; May, 51°.2; June, 63°.6; July, 65°.9; August, 64°.8; September, 51°.3; October, 40°; November, 14°.6; December, 0°.6; the year, 32°.6.

The isotherms indicated on the map were taken from the map prepared to Professor Macouns' work.

Topography.—The topography of Manitoba is somewhat perplexing through the duplication of names. Many, such as Pelican Lake, Swan Lake, Shoal Lake, Rat Creek, etc., appear several times over. None of these duplications have been entered on the map, with the exceptions of Shoal Lake and Boggy Creek. In the first case I have added the word "West" to the name of the lake which is of secondary importance and probably of later naming. In the second the three creeks are distinguished as Boggy Creek, Big Boggy Creek, and Little Boggy Creek. Every name referred to in the notes, with exceptions noted herein later, will be found on the map, with many additional ones that are of importance. Frequent allusion is made to Professor Macouns' journeys and the region observed by him in making them. These expedi-

tions were as follows: 1879, from Winnipeg to Fort Ellice by water and thence up the Qu'Appelle River; 1880, from Winnipeg to Grand Valley, now Brandon, by water and thence overland to Moose Mountain; 1881, from Winnipeg to Portage la Prairie by rail, thence overland to Totogon down Lake Manitoba by boat into Waterhen River and into Waterhen Lake, and back by the western channel into Lake Winnepegosis, and along the western shore of this lake into the larger bays, up Swan River to Swan Lake, then back to Winnepegosis and up Red Deer River to Red Deer Lake, up its southern affluent across country to Livingstone and down the Assiniboine to the railroad at Brandon.

Humphrey's or McGee's Lake, Hope's Lake, Smith's Lake, and Markle's Lake are small drainage lakes near Carberry. White Horse Hill, Kennedy's Plain, and De Winton Slough are also close to Carberry. These have been omitted from the map, as they are too small for the scale on which it is drawn.

The following places outside of the province have been mentioned to to extend or explain the distribution of certain species:

Carleton House: On the north branch of the Saskatchewan.

Cumberland House: On the Lower Saskatchewan.

Fort Pelly: On Assiniboine River, 10 miles west of Duck Mountain.

Fort Qu'Appelle: On Qu'Appelle River, 100 miles up from its junction with the Assiniboine.

Moose Mountain: Assiniboia, 35 miles westward of Manitoba, about latitude 49° 40′ north.

Nelson River: The outlet of Lake Winnipeg, situated at its north end.

Norway House: North end of Lake Winnipeg.

Rat Portage: On the Lake of the Woods, where it is touched by the Canadian Pacific Railway.

Red Deer River: Flowing into Red Deer Lake, at the northwest corner of the province.

Severn House: On Severn Lake, at 54° 5′ north latitude and 92° 30′ west longitude, about 150 miles northeastward of the province.

Selkirk: Lake Winnipeg, about 40 miles north of the northern boundary.

Touchwood Hills: 30 miles north-northwest of Fort Qu'Appelle.

Trout Lake House: On Trout Lake, at 53° 50′ north latitude and 91° west longitude, about 200 miles northeast by east of the province.

White Sand River: A tributary of the Upper Assiniboine, near the northwest corner of the province.

1. Æchmophorus occidentalis. Western Grebe.

Tolerably common summer resident in Red River Valley, chiefly towards the northward, as follows: Quite common at Shoal Lake, near Lake Manitoba, and less so at Redburn (Hine). A rare summer resident along Red River (Hunter). Breeding in vast numbers at Shoal

Lake and Lake Manitoba, not elsewhere (D. Gunn). "Clark's Grebe," Shoal Lake (Brewer). Breeding on Lake Manitoba and very abundantly in the marshes of Waterhen River, between it and Lake Winnepegosis. I took great numbers of eggs on Waterhen River and the south end of Waterhen Lake (Macoun).

I did not meet with this bird in any part of western or southern Manitoba, but at Winnipeg I was shown several specimens taken near Redburn, where it is somewhat common, and others from Shoal Lake, where it is quite plentiful. These facts, together with the following statement by Professor Macoun, are the more interesting when we consider that for a long time this grebe has been considered a bird of the Pacific region.

In his work on the Northwest, Professor Macoun writes:

On Waterhen River and Lake the Western and Red-necked Grebes breed in great numbers. Their nests are built on the old sedges and rise and fall with the water. Here the Indians collect large numbers of eggs in the proper season, and one old fellow, last season, astonished me by the remark that he could have fresh eggs all summer. On inquiry I learned that he went regularly to the same nests and never took all the eggs so that he kept the poor bird laying all summer.

Mr. D. Gunn makes the following remarks on this species at the lake in question:

The annual resort of the *Podiceps occidentalis* to Shoal Lake is, as has been observed, "remarkable." From the most reliable information that I could obtain from the Indians at this place it has never been seen on the Red River nor on on Lake Winnipeg, and I have never heard of its having been seen anywhere in what is commonly known as Rupert's Land, except at Shoal Lake and Manitoba, and I may add that it is also remarkable that there are very few grebes to be found in any other of the bays connected with the lake, although all these bays abound in reeds and rushes. Possibly these birds prefer the bay on the north point on account of its being sheltered from the wind, and probably a greater facility for obtaining food in that locality may influence them in the choice they make. I am inclined to think that the large grebes feed on aquatic plants; I opened several of their gizzards and found nothing in them but grass. The Western Grebes, when seen in groups on the smooth, unruffled waters of the lake, make a splendid appearance, sometimes raising themselves out of the water, and flapping their wings, their white breasts glistening in the sun like silver. They are not timorous, but when alarmed they sink their bodies in the water, and if the object of their fear still presents itself they plunge head foremost and dive and continue a long time under the water, often disappointing the expectations of their pursuers by reappearing in a different direction from that anticipated. They make their nests among the reeds on the bent bulrushes of the last season; the frame or outer work is of reeds and lined with grass from the bottom and reed leaves. The nest is nearly on a level with the surrounding water and may be said to float at its "moorings," held there by the reeds. We found hundreds of these nests containing two, three, and four eggs each; I believe six to be the highest number we found in any one. We took thirteen grebes, of which the males were larger than the females; the largest male measured, before skinning, 27¼ by 36¼ inches and 14 inches round the body at the head of the wings. The largest female measured 24¼ by 32¼ inches. We shot not a few of them in the act of leaving their nests, and most of them on being skinned proved to be males, which fact inclines me to believe that the male bird takes his turn in sitting on the eggs.

2. Colymbus holbœllii. Holbœll's Grebe. Red-necked Grebe.

Summer resident chiefly of the shallow, fish-frequented lakes to the northward. Winnipeg: Summer resident; very rare; only 4 specimens taken up to 1885 (Hine). Breeding in considerable numbers at Shoal Lake; comparatively rare in Red River region (D. Gunn). Specimen from Red River settlement in Smithsonian Institution (Blakiston). Breeds abundantly in the marshes of Waterhen River and south end of Waterhen Lake, where I took great numbers of its eggs (Macoun). Duck Mountain; breeding (Thompson).

On June 18, 1884, while hunting at Duck Mountain, above Boggy Creek, with my brother, we came to a small lake and parted to go around it in different directions. When we met, he showed me a nest which he had found among the reeds in 2 feet of water. It was a mere floating mass of wet rushes, and had been moored by a few growing rushes whose tops had been incorporated with the structure. It contained 3 eggs, which the bird was hastily covering with more rushes when he first saw her. From his description, and from what I could see at 200 yards distance, it was apparently an adult Red-necked Grebe, but the bird was too shy to admit of the identification being completed in the only perfectly reliable way.

As there are no fish in these isolated mountain lakes, these birds probably live largely on amblystomæ, crawfish, and insects.

3. Colymbus auritus. Horned Grebe.

Abundant summer resident of general distribution; very abundant; breeding at Pembina and the base of the Turtle Mountain (Coues). Lake Winnipeg (Murray). Red River (Kennicott). Common summer resident in Red River Valley (Hunter). Common about Winnipeg (Hine). Very common on Red River, and breed in the marshes near Shoal Lake (Gunn). Portage la Prairie; common summer resident (Nash). Observed in the ponds from Turtle Mountain to Brandon, in May, 1882; commonly breeding in all the ponds about the Big Plain, being the most abundant Grebe of the region; common also from Carberry to Rapid City and thence west to Fort Ellice, and in the whole region on both sides of the Assiniboine, northward to Duck Mountain (Thompson). Abundant on Waterhen River; breeding; they give the name to the river; the common Grebe of the prairie ponds (Macoun). Shell River; 1885, first seen, two on May 3; afterwards seen every day; it is common all summer and breeds here (Calcutt). Trout Lake (Murray).

On July 20, 1883, in a lake near "The Gore," shot a Horned Grebe. It had saved itself once or twice by diving at the puff of smoke, so I sought the cover of the bushes and fired through an opening, and as no smoke was visible I got the bird. It was an adult male; length, 14 inches, extent 24 inches; moulting; iris blood red, with an inner circle of white around it; basal region and part of lower mandible adjoining

covered with bare red skin ; in examining the eye, I squeezed out a leech, that was sometimes like a No. 4 shot or again like a small needle.

On June 3, 1884, while traveling on the Birtle trail from Rapid City I noticed a pair of Horned Grebes in a small pond. I fired and disabled one. On wading in I found it was shot in the eye and was perfectly blind, though otherwise unhurt. Having heard sundry curious theories about the way in which these birds move their feet, I kept it alive for observation. When ordinarily swimming the feet strike out alternately, and the progression is steady, but sometimes both feet struck together, and then the movement was by great bounds and was evidently much better calculated to force the bird over an expanse of very weedy water or through any tangle of weeds or rushes in which it might have found itself. When lifted out of the water the feet worked so fast as to be lost to the eye in a mere haze of many shadowy feet with one attachment. When placed on the ground it was perfectly helpless. At nights I laid it by my side on the grass, and each morning I found it still in the same place. During the day I carried it in a bucket swung under the wagon. It often tried to leap out of this, but never succeeded. On the second day of its captivity it laid an egg, which was like a duck's egg with a heavy coat of whitewash. On the third day, after the wagon had crossed some rough ground, which had set the pail violently swinging, I found the grebe was gone. All the specimens of *cornutus* that I have examined have the eye all blood-red except a thin ring of white which immediately surrounds the pupil.

On August 21, 1884, shot a Horned (?) Grebe in the lake southwest of here. Several young ones were seen. No doubt the species breeds there as in all the small drainage ponds in this region, although they are totally devoid of fish. The only animal food available for the grebes in there is amblystomæ, frogs, leeches, and insects.

Dishishet Seekeep or Little Diver. This bird differs but little from Mr. Pennant's small grebe. It weighs 5¼ ounces, harbors in our fresh waters, where it builds a floating nest of grass, laying from three to five eggs of a white color; the heat of the bird causing a fermentation in the grass, which is a foot thick, makes a kind of hot-bed, for (please to observe) the water penetrates through the grass to the eggs. (Hutchins's Observations on Hudson Bay. MSS. 1782.)

4. Colymbus nigricollis californicus. American Eared Grebe.

Common summer resident, breeding abundantly on Turtle Mountain and at points along Mouse River, near the boundary (Coues). Common summer resident in Red River Valley (Hunter). Winnipeg: Summer resident tolerably common (Hine). Breeding in great numbers at Shoal Lake and on Red River (D. Gunn). Quite common on pools in prairie regions (Macoun). Very numerous in this bay (Grebe Bay, Shoal Lake). They make their nests on the bulrushes, composed of the same material. We found as many as six eggs in some nests, but in the greater number of nests only four. They are very shy and

expert divers, are very common on the Red River, and breed in the marshes near the lake (D. Gunn).

5. **Podilymbus podiceps.** Pied-billed Grebe. Dabchick.

Common summer resident in all waters, living and dead; breeding at Pembina and on ponds at the base of the Turtle Mountain (Coues). Winnipeg: Summer resident; tolerably common (Hine). Red River Valley: Summer resident; common; breeds at Shoal Lake (Hunter). Portage la Prairie; very abundant; summer resident on every lake, slough, or pond large enough to give them sufficient "water privilege;" arriving as soon as the ice is out and departing when their haunts are frozen over. First seen, May 6, 1884, April 24, 1885, April 19, 1886 (Nash). Frequently observed in the ponds from Turtle Mountain to Brandon; in May, 1882, common and breeding in the ponds about Carberry, also at Rapid City (Thompson). In immense numbers (killed four at a shot) in August and early part of September on the headwaters and marshes of Swan River; abundant on all pools south of Touchwood Hills; apparently more northern than the preceding (Macoun). Shell River, May 4 (Calcutt).

On June 30, 1882, at Rapid City, found a Pied-billed Grebe lying dead on the road. This species seems to be very abundant throughout the country from here to Carberry, and from Carberry to Turtle Mountain, for the peculiar call note "*pr-r-r-r-r tow tow tow tow*" (that I ascribe to this species) is heard in nearly every marsh throughout the region indicated.

On August 12, 1883, I came on a pair of Pied-billed Grebes in McGee's Lake, Carberry. Instead of diving they commenced flapping over the surface and excited my curiosity so that I shot them both. They were both Dabchicks, and I found they would not dive because the water was very weedy at that place. Their gizzards were full of water insects and feathers. These last are commonly found in gizzards of Grebes. I know of no explanation of this fact, unless it be to muffle the movements of newly swallowed living prey.

On September 13, 1884, at Portage la Prairie, found Dabchicks here yet. They seem more numerous here than at Carberry.

6. **Urinator imber.** Loon. Big Helldiver.

Summer resident on the larger fish frequented lakes. Summer resident; abundant, and breeding on Lake Winnipeg and the larger rivers (Hine). Swampy Island: 1885, first seen, four, on May 30; next seen May 31; rare around this island; not breeding here; common at northern end of lake in fall; last seen September 27; in 1886, first seen, twenty, on May 14 (Plunkett). Oak Point: 1884, arrived May 1 (Small). Portage la Prairie: Tolerably common on Lake Manitoba throughout the summer, arriving with the first general thaw in spring and retiring when driven out by the frost (Nash). Common only on the northern

lakes in the forest country; saw some on Red Deer Lake; never more than a pair together; never saw it in the prairie region (Macoun). Riding Mountain: June, 1884 (Thompson). Shell River: 1885, first seen, a pair on May 4; afterwards, seen every day; is common all summer and breeds here (Calcutt). Qu Appelle: Common summer resident, breeds; arrives April 28 (Guernsey). Severn House (Murray).

Athinue moqua, or Great Northern Diver. This elegant bird is seldom seen on the seacoasts, but resides among the lakes above 100 miles to the southward of York Fort, for which reason they are called the inland loons. (Hutchins's MSS. Observations on Hudson's Bay, 1782.)

7. Urinator arcticus. Black-throated Loon.

Recorded by Andrew Murray, from Severn House, and therefore probably Manitoban.

8. Urinator lumme. Red-throated Loon.

Winnipeg: Rare (Hine). Norway House (Bell).

Assee moqua, or Red-throated Diver. * * * It appears in these parts when the rivers are open and retires about the end of September. Its note is harsh and disagreeable, like squalling. They make no nest, only lining the place with a little down from the breast, on which they deposit their eggs towards the end of June; they are of a stone color and only two in number. The young ones fly before the end of August. They live chiefly on fish and are excellent divers, and so very troublesome to the nets that I have this summer taken out fourteen of them that were caught in one tide at a single net. (Hutchins's Observations on Hudson's Bay, 1782.)

9. Cepphus mandtii. Mandt's Guillemot.

Severn House (Murray). This species may be named as probably Manitoban on the above grounds.

10. Larus argentatus smithsonianus. American Herring Gull.

Summer resident about the larger bodies of water; breeding in great numbers at Lake Winnipeg (D. Gunn). Specimen from Nelson River, in Smithsonian Institution (Blakiston). Oak Point: 1884, arrived April 21; 1885, first seen, two, on April 18; next seen, two, on 19th; is common, and breeds here (Small). Breeding in all the large prairie lakes (Macoun). Portage la Prairie: Occurs during the spring and autumn migrations (Nash). Severn House (Murray).

The island on which we were detained by a storm, is one of the Gull-egg group, which, with a point of land protruding from the main land, forms a pretty good harbor on the south side of the neck of the great promontory. The Indians were nearly destitute of provisions and followed us to the island, where they fortunately got a plentiful supply of eggs and young gulls; but having little ammunition, they brought down only a few old ones, although they hovered in countless numbers over the island, screaming at the wholesale destruction of their young brood. (Hurd, August 24, 1858.)

11. Larus delawarensis. Ring-billed Gull.

Summer resident, near Mouse River, on the boundary, in September (Coues). Winnipeg: Summer resident, tolerably common, and at Lake

Winnipeg (Hine). North, in summer, to Lake Winnipeg (Brewer). Breeding in all the lakes of any size (Macoun).

12. Larus franklini. Franklin's Gull. Rosy Gull.

Summer resident about the large lakes. Winnipeg: Summer resident; abundant; breeding in the prairie marshes of the neighborhood (Hine). Swamp Island: 1885, first seen, two, on May 28; next seen, May 29, after which it was common; it breeds here, and is an abundant summer resident; in fall, last seen September 25; 1886, first seen, six, on May 18; bulk arrived May 20 (Plunkett). Breeding at Selkirk Settlement, Red River Settlement, and in numbers at Swan Creek, Oak Point, Lake Manitoba (D. Gunn). Shoal Lake: May 15, 1887; common (Christy). Portage la Prairie: Common in spring migration; in 1884, first seen April 21 (Nash). Breeding abundantly on Lake Winnepegosis, 1881 (Macoun). Carberry: A common spring migrant (Thompson). Turtle Mountain: Young (Coues). Shell River: 1885, "Black-Headed Gull," first seen, two, on April 24; next seen, nine, on May 2; a transient visitant passing north and not remaining any time or breeding (Calcutt).

13. Larus philadelphia. Bonaparte's Gull.

Summer resident about the larger lakes. Winnipeg: Tolerably common here in fall (Hine). A few breeding in the marsh of Swan Creek, not far from Shoal Lake (D. Gunn). Breeding in great abundance on all the large lakes of the prairie region, chiefly west of Manitoba (Macoun). One in Smithsonian Institution from Nelson River (Blakiston). Portage la Prairie: Abundant during the spring migration, and some probably stay to breed, as I have occasionally seen single birds about the prairie sloughs during the summer (Nash). Severn House; fortunately several specimens of this gull have been received; it is rare in collections, but would appear not to be so in Hudson's Bay (Murray).

14. Sterna forsteri. Forster's Tern.

Summer resident about the large lakes; breeding in large numbers on the borders of Lake Winnipeg in the latter part of May; at Shoal Lake, saw Forster's terns in considerable numbers; they nest among the reeds; Selkirk Settlement (D. Gunn). Shoal Lake, May 15; common (Christy). Breeding abundantly in Lake Manitoba, Waterhen River, and Lake Winnepegosis (Macoun). Portage la Prairie: Abundant during the spring and autumn migrations; probably breeds, as I have seen a few in summer (Nash).

15. Sterna hirundo. Common Tern. Sea Swallow.

Common summer resident on the large lakes; feeding largely on small fish. Winnipeg: Summer resident; tolerably common (Hine). One

taken on Lake Winnipeg, June 16 (Humicalt). Breeding on Lake Manitoba, Waterhen River, and Lake Winnipegosis (Macoun). Portage la Prairie: Tolerably common during spring and autumn migrations; a few remain about Lake Manitoba during the summer (Nash).

There are numbers of terns breeding annually at Shoal Lake; some of them on small, gravelly islands. These form their nests by removing the gravel, making hollows in which they lay their eggs; others of them take up their abode among the reeds and rushes. Here, with great industry and ingenuity, they make their nests of reeds and grass, fixing them in their place to keep them from floating away. When in Lake Winnipeg, in 1862, I observed that the terns which occupied sandy and gravelly islands made their nests as those do on the gravelly islands in Shoal Lake; and the terns found on the rocky island on the east side of the lake chose for their nests depressions and clefts in the surface of the rocks. These they line carefully with moss; three or four eggs being laid in each nest; thus exhibiting a remarkable example of instinct, which teaches these little creatures that their eggs laid in soft sand and in loose gravel are safe without any lining to protect them, but that when laid in hollows and clefts of rocks, lining to protect their eggs and young from injury by these hard, and at night cold, materials would be indispensable. (D. Gunn.)

16. Hydrochelidon nigra surinamensis. Black Tern, or Marsh Tern.

Abundant summer resident; chiefly about the prairie ponds, dead waters; breeding at Pembina; Mouse River at the boundary (Coues). Winnipeg: Summer resident; abundant (Hine). Abundant in Red River and Selkirk Settlements (Brewer). Prairie Portage; plains of the Souris (Hind). Portage la Prairie: Abundant summer resident on all the large prairie sloughs, in which they breed; first seen, May 11, 1884, May 25, 1885; last seen, September 9, 1884 (Nash). Breeding very abundantly in all marshes from Portage la Prairie westward, 1879, and in less numbers in the wooded region, but generally distributed (Macoun). Carberry: Abundant; summer resident; breeding also in all ponds along the trail from Carberry to Port Ellice (Thompson). Brandon: Breeds in great numbers (Wood). Shell River: 1885, first seen, eleven, on May 18; seen every day afterwards; is common all summer, and breeds here; Indian name, "K'ask" (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 18 (Gurnsey). Severn House (Murray).

On June 11, 1882, went in the morning with two brothers to the lake in the sand hills east of old Dewinton; saw there large numbers of marsh terns. They appeared to be nesting in a weedy expanse far out in the lake, but it was surrounded by deep water, so that I could not come near it to seek for eggs. The birds came flying over my head, in company with numbers of blackbirds, and resented my intrusion by continually crying in their characteristic manner.

August 4. The black terns are beginning to gather in flocks; leave the ponds and skim about over the open prairie.

On July 8, 1883, went southwest to Smith's Lake; found a number

of tern's nests, just finished, apparently, as they were clean, but empty, and the old birds continued flying above us and screaming their resentment.

On July 5, 1884, at McGee's Lake, Carberry, I found the terns just beginning to lay. Each nest is a mere handful of floating reeds, slightly moored to others growing in the deep water, where they are found. The whole structure is just on a level with the surface of the water and entirely wet; on this are the eggs, much the same color as the reeds, and as wet as eggs can be.

It is a remarkable fact that, although this species is abundant in all parts of southwestern Manitoba, and I have often searched in various lakes with a flock of terns screaming about my ears, yet I have never before found either nest or eggs. On this occasion I found three eggs in one nest; several nests with two eggs; one or two with one, and one or two empty nests just completed.

On July 9 the terns were numerous everywhere on the prairie. Timed and counted the wing beats of several as a basis for calculating their rate of flight; one made 54 beats in 9 seconds; another, 28 beats in 9 seconds, a third 30 in 10 seconds. July 6, observed one make 27 beats in 10 seconds. July 12, saw another make 15 beats in 5 seconds, showing that about 3 is the average number of beats to the second. July 5 I had an opportunity of measuring the distance a tern covers with 8 beats; it was 24 yards.

August 14: Terns are abundant now on the open prairie; it is a common sight to see this bird zigzagging about in pursuit of the large dragon flies, until, at length, having secured as many as it could conveniently carry, it suddenly ceased the fantastic maneuvering for the swifter beeline, and made straight for its twin nestlings in the reedy expanse of some lake far away.

To-day, I made a calculation of the speed; one bird covered 70 yards with 14 beats, *i. e.*, 5 yards per beat; I find they usually give 3 beats per second; this, therefore, is 15 yards per second or 31 miles per hour; much less than I expected. This black inland member of a white marine family is abundant about all the weedy sloughs and lakes of the Manitoban prairie regions. It seems not to subsist on fish at all, but chiefly on dragon flies and various aquatic insects. It finds both its home and its food in the marshes usually, but its powers of flight are so great that it may also be seen far out on the dry open plains scouring the country for food at a distance of miles from its nesting ground.

The voice of the species is a short, oft-repeated scream, and when any known enemy, be it man or beast, is found intruding on the privacy of their nesting ground the whole flock comes hovering and dashing about his head, screaming and threatening in a most vociferous manner. Under such circumstances it is the easiest thing imaginable to procure as many specimens as may be desired. When one of the flock falls wounded in the water, its fellows will repeatedly dart down and hover

low over it, but I have never seen any attempts made to assist it in escaping, after the manner ascribed to some of the family.

Besides aquatic insects the Black Tern feeds largely on dragon flies, which it adroitly captures on the wing. The bird may frequently be seen dashing about in a zigzag manner so swiftly the eye can offer no explanation of its motive until, on the resumption of its ordinary flight, a large dragon fly is seen hanging from its bill and sufficiently accounts for the erratic movements of the bird. After having captured its prey in this way I have frequently seen a tern apparently playing with its victim, letting it go and catching it again, or if it is unable to fly, dropping it, and darting under it to seize it again and again before it touches the water. After the young are hatched, a small flock of the old ones may be seen together leaving the pond and winging their way across country to some favorite dragon-fly ground. Their flight at first is uncertain and vacillating, but as soon as one has secured its load it returns with steady flight and in a straight line to its nest.

Under ordinary circumstances I was always impressed with the idea that the tern was very swift and entered into a series of elaborate calculations to ascertain the rate of its flight. A large number of observations resulted in an average of three wing-beats per second, with the greatest of regularity; another series of observations, not so satisfactory, allowed a distance of 5 yards to be traversed at each beat. This gave only the disappointing rate of something over 30 miles per hour, but this was at the uncertain foraging flight. Once the mother tern has secured her load of provender, a great change takes place, as already mentioned; she rises high in air, and I am sure she doubles her former rate of speed, and straight as a ray of light makes for home. It is said that many birds can not fly with the wind; not so the tern; for now, if there be a gale blowing her way, she mounts it like a steed and adds its swiftness to her own, till she seems to glance across the sky, and vanishes in the distance with a speed that would leave far behind even the eagle, so long the symbol of all that was dashing and swift.

17. **Phalacrocorax dilophus.** Double-crested Cormorant. Crow Duck.

Summer resident about the large lakes of the westward region when there is plenty of fish; once observed on Red River near Pembina (Coues). Winnipeg: Summer resident; not rare, and found breeding at Lake Winnipeg; occasional on Red River (Hine). Breeding at Shoal Lake and Selkirk Settlement (D. Gunn). Shoal Lake: Plentiful; breeding; May 16, 1887 (Christy). Ossowa: Breeding (Wagner). Portage la Prairie: Tolerably common during the spring migration, on the Assiniboine and Red Rivers, and the wooded sloughs adjacent to them, but very seldom seen in the autumn; first seen April 24, 1885, April 20, 1886; on October 8, 1886; I saw one flying up the Red River southward; these birds are very wild and difficult of approach when on the water, rising with a great flapping before one can get within 200

yards of them (Nash). Very abundant; breeding on Lake Winnepegosis in 1881 (Macoun). Shell River: 1885, first seen, four, on May 13; next seen, two, on May 14; a transient visitor only; not breeding. (Calcutt). Qu'Appelle: Rather common summer resident; April 25, breeding north of the Touchwood Hills; nesting on the trees growing on islands in the lakes (Guernsey).

Fort Qu'Appelle, May 19, 1885. The Cormorant comes here in large flocks towards the end of April; it is called by half-breeds the Crow Duck; in its flight it flaps for three or four strokes and then sails; it is an expert diver. The half-breeds say that it builds on islands in the lakes north of here, building its nests on trees. They say that when a man lands on one of their breeding places the birds fly over him and drop their excrement on him. I have been told this by several. They do not breed here that I know of, but there are always several knocking about during the summer; they sit on the bars with the pelicans. (Geo. F. Guernsey).

18. Pelecanus erythrorhynchos. American White Pelican.

Common summer resident about the large lakes; one taken at Pembina in May; observed at Mouse River on the boundary in September (Coues). Winnipeg: Summer resident; common about the large lakes; breeding at Shoal Lake (Hine). Red River Valley: Summer resident; common; breeds at Shoal Lake (Hunter). Shoal Lake (Christy). Breeds in the smaller lakes near Lake Winnipeg, and northwestward; several specimens shot in Lake Winnipeg in October, 1880 (Bell). Swamp Island: 1885, first saw two on May 24; next seen May 31, after which it was common; it breeds here; in fall, last seen September 12, 1886, first saw, two, on April 29; bulk arrived May 27 (Plunkett). September 1, 1884, saw a flock of five on Lake Manitoba; the only ones I ever saw (Nash). Waterhen River: October 3, 1858, a large flock of pelicans, wheeling in circles far above, suddenly formed into an arrow-headed figure, and struck straight south; Oak Lake, some Pelicans (Hind). In great numbers at the head of Lake Winnepegosis or about half way up, and evidently breeding, 1881 (Macoun). Carberry: November 5, 1886, found remains of a dead pelican in the hills near Smith's Lake; only record (Thompson). Dalton: 1889, first saw one on May 4; next seen, May 5; rare (Yoemans). Qu'Appelle: Common summer resident; very plentiful on the lakes last year (1884); towards the migratory season I saw flocks of upwards of 500 birds (Guernsey). Pelican observed in numbers at the Grand Rapids, where the Saskatchewan enters Lake Winnepeg, on the 25th of September, and a few days after a scattered one or two; I believe they do not range east of Lake Winnipeg (Blakiston).

These birds until the last few years were in the habit of breeding in large numbers at Shoal Lake, 50 miles from Winnipeg. In the summer of 1878, on the 1st of June, I counted six hundred of their eggs (?) in nests on a small island of about half an acre in extent. The nests consist only of a slight depression in the sand. These birds and the cormorants are great friends; the nests of the latter were intermixed everywhere with those of the pelicans. I counted seven hundred eggs of the cormorant on this spot. Although the pelican's home and nesting place is an abode of filth, they keep

themselves exceedingly clean. Their flight I consider more beautiful and graceful even than that of the swan. (Richard H. Hunter in MSS.)

Fort Qu'Appelle, May 19, 1885. Some years the pelicans are more numerous than others. Last year they were very thick all summer, and towards the end of summer it was no unusual thing to see forty or fifty in a flock sitting on the water. They are reported to breed in large numbers on Long Lake, 40 miles west of here. (George F. Guernsey in MSS.)

19. Merganser americanus. American Merganser. Sheldrake.

Summer resident, frequenting only living water. Winnipeg: Summer resident; rare; Lake Winnipeg (Hine). Red River Valley: Summer resident; common; breeds at Shoal Lake (Hunter). Breeds abundantly on the rivers emptying into Lake Winnepegosis, and on all the rivers visited by me in Manitoba; I never observed this bird on still water during the breeding season; they feed only on fish, and are found only on clear running streams where fry are abundant (Macoun). Qu'Appelle: Tolerably common summer resident; May 5 (Guernsey).

20. Merganser serrator. Red-breasted Merganser. Fish Duck.

Summer resident, chiefly on living waters. Winnipeg: Summer resident; rare; Lake Winnepeg (Hine). Red River Valley: Summer resident; tolerably common; breeds at Shoal Lake (Hunter). Breeds in all the northern streams and ponds; feed largely on vegetable matter and are quite edible (Macoun). Carberry: August 21, 1884, at Hope's Lake, shot a merganser; rare here (Thompson). Qu'Appelle: Tolerably common; summer resident; May 1 (Guernsey). Trout Lake, Severn House (Murray).

21. Lophodytes cucullatus. Hooded Merganser.

Summer resident, chiefly inhabiting drainage, that is, dead water; breeds; Turtle Mountain and Mouse River along the boundary (Coues). Dufferin: Arrived between April 20 and 25 (Dawson). Winnipeg: Summer resident; common; breeding at Lake Winnipeg (Hine). Portage la Prairie: Tolerably common; summer resident; first seen April 27, 1885, April 23, 1886; abundant on La Salle River and on Horse Creek near Westbourne (Nash). Found in all the smaller ponds and lakes; very common in streams around the Porcupine Mountain; feeding on vegetable substances and quite edible, unlike *M. americanus* (Macoun). Carberry: Tolerably common summer resident; breeding (Thompson). Shell River: 1885, first seen, eight, on May 11; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 20 (Guernsey). Trout Lake (Murray).

22. Anas boschas. Mallard.

Very abundant; summer resident; general distribution in grassy freshwater marshes, etc.; breeds abundantly throughout the region in suitable places, from Pembina along the boundary to the Rockies

(Coues). Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Summer resident; abundant (Hine). Ossowa: Common; breeding; 1885, first seen, two, on April 6; next seen, April 13 (Wagner). Swampy Island: 1885, first seen, two, on April 16; next seen, April 20; became common April 26; breeds here in fall; last seen October 1; 1886, first seen, two on April 16; next seen, April 17; (Plunkett). Oak Point: 1885, first seen, two, on April 7; next seen, April 8; became common on April 11; breeds here (Small). Portage la Prairie: 1884, very common; summer resident; first seen, March 30; a few sometimes remain till after the snow covers the ground (Nash). The most abundant duck of the Northwest, breeding in nearly all the marshes north of the boundary (Macoun). Carberry: Abundant in migration; a few breed; Souris Plain; Turtle Mountain; Long River; Fingerboard; near Rapid City; near Two Rivers; Pine River; Portage la Prairie (Thompson). Brandon: April 13, 1882 (Wood). Dalton: 1889, first seen, four, on March 21; next seen on March 23; became common on March 26; breeds here (Youmans). Shell River: Common summer resident; breeds; in 1885, first seen, twelve, on April 6; afterwards seen every day (Calcutt). Qu'Appelle: Common summer resident; breeds April 5 to 15 (Guernsey). Trout Lake Station and Severn House (Murray). Near Cumberland House are found in vast multitudes (Hearne, 1773).

June 11: While roaming in Spruce Bush, to-day, I came suddenly across a wild duck (Mallard) with her newly hatched brood. She was leading them to the water, which was a considerable distance away, perhaps a quarter of a mile, and in this locality the forest was high and dry. The old duck ran to meet me and then put in practice all the usual stratagems to cover the retreat of her brood; meanwhile the little ones scattered and ran, "peeping" in all directions, and soon all had hidden themselves from view, except five, which I caught. The remaining four or five I did not try to get, but left them for the mother to gather together again. My little captives I took home with me, fondly believing I could rear them.

On October 30, 1886, saw three Mallard at Smith's Lake. I have often lain in the long grass on the bank of some pond and watched the whole family as they played about on the glassy surface, now splashing the water over the backs, apparently to show how they mean to do it when they are big rather than for any present benefit, and now rushing pattering over the surface in pursuit of some passing fly and generally with success crowning the effort, for when young they feed almost exclusively on insect food. I touched one of the tall stems so that the top shook; the watchful mother failed not to observe that there was something in the rushes, and slowly led her brood in another direction; or if I stood up in full view, she gave to her startled brood the watchword of alarm, which to judge from her actions may be translated "scatter and run for your lives into the rushes while I divert the brute's attention."

There have been times when it was the necessity for food that led me where I have observed such scenes as that described, but I can say truly that each time the brave mother was allowed to go in peace and the hunt was prolonged until another though perhaps a less palatable victim was found and sacrificed.

They arrive early in April, frequently before the lakes or large sloughs are free from ice, resorting to the wet prairies and stubble-fields; the great bulk are paired when they reach here and they soon commence nesting. their nests being made in all sorts of places. I have found them in the marshy sloughs on the open prairie, near water usually, and once in the bush at least a half a mile from a very small stream that always dried up during the summer, but which was the only water for a long distance.

About the middle of May the females commence to set; the drakes then molt, losing their brilliant plumage; whilst undergoing this change they gather together into small flocks of about five or six and hide themselves in the rushes, from which it is very hard to dislodge them even with good dogs.

In September they gather into flocks, young and old together, and visit the wheat and barley stubbles, rapidly becoming fat; the drakes at this time begin to show the green feathers on their heads, and by the time they leave they have acquired their perfect plumage.

A few frequently remain for some little time after the snow has covered the ground; these I have seen feeding around the base of the stacks and resorting to Lake Manitoba for water; in 1885 they were abundant up to November 9, but left on the day, after, for on the 11th I saw the last of the season, a single bird only.

On the 15th of September, 1882, I shot a large drake, which had pure white pinion feathers and a broad band of white from the usual ring around the neck to the breast; this bird was with seven others, all of the usual color and size. (Nash, in MSS.)

23. Anas obscura. Black Duck. Dusky Duck.

Very rare summer resident. Winnipeg: Summer resident; rare; only two specimens in 10 years, one at Long Lake, one at Lake Winnipeg (Hine). Red River Valley: Very rare; Manitoba is their most western limit (Hunter). I have received a specimen and seen others from York Factory (Blakiston).

24. Anas strepera. Gadwall. Gray Duck.

Rare summer resident; abundant throughout the region along the Boundary from Pembina to the Rockies; breeds (Coues). Winnipeg: Summer resident; tolerably common (Hine). Red River Valley: Summer resident; tolerably common at Lake Manitoba (Hunter). Breeding on Shoal Lake (D. Gunn). Only one specimen shot on the Assiniboine, September, 1881 (Macoun). Portage la Prairie: Rare; have shot a few in the autumn near Lake Manitoba (Nash). Qu'Appelle: Common summer resident; breeds; April 20 (Guernsey).

25. Anas americana. Baldpate, or Widgeon.

Tolerably common summer resident; abundant throughout the region along the boundary from Pembina to the Rockies; breeds (Coues). Dufferin: Arrived between April 20 and 25 (Dawson). Winnipeg: Sum-

mer resident; tolerably common (Hine). Selkirk Settlements: Breeding; Lake Winnipeg in the breeding season in considerable numbers (D. Gunn). Swampy Island: 1885, first seen, four, on May 10; next seen, May 11; bulk arrived May 12; is common, and breeds here; in fall, last seen, October 2; 1886, first four on May 10; bulk arrived on May 13 (Plunkett). A specimen from between Lake Winnipeg and Hudson Bay in Smithsonian Institution (Blakiston). Portage la Prairie: Abundant summer resident; breeding at Lake Manitoba and in all the sloughs in this vicinity; this is the last duck to arrive in the spring and the first to leave in the fall; in 1884, first seen, April 16 (Nash). Silver Creek: July 5, 1882, shot a Widgeon, female; apparently breeding; length, 18; extension, 33; gizzard full of shell-fish (Thompson). Shell River: 1885, first seen, a pair on May 12; next seen, four, on May 23; is common all summer, and breeds here (Calcutt). Frequent on the Assiniboine; 1881 (Macoun). Qu'Appelle: Common summer resident; breeds; April 20 (Guernsey).

26. Anas carolinensis. Green-winged Teal.

Abundant migrant; many breeding; extremely abundant throughout the region along the boundary from Pembina to the Rockies in August; doubtless some breed (Coues). Dufferin: Arrived between 15th and 20th (Dawson). Winnipeg: Summer resident; abundant; breeding (Hine). Swampy Island: 1885, first seen, two, on May 3; next seen, the bulk, May 6; is tolerably common, and breeds here; in fall, last seen September 1; 1886, first seen five on May 8; bulk arrived May 10 (Plunkett). Very common near Norway House; scarce northward (Bell, 1880). Portage la Prairie: 1884, abundant migrant and common summer resident, arriving at about the same time as the Mallard, but leaving as soon as the sloughs are frozen over; I have found flappers as late as the 15th of August (Nash). Rarely found breeding on the plains; apparently goes further north; in immense flocks on the Assiniboine in the fall of 1881 (Macoun). Carberry: common; breeding; Silver Creek, Rapid City (Thompson). Dalton: 1889, first seen, two, on April 15; next seen on April 16, when it became common; does not breed here (Youmans). Brandon: April 20, 1882 (Wood). Shell River: 1885, first seen, a pair on May 2; afterward seen every day; is common all summer, and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds April 5 to 15 (Guernsey).

On June 29, 1882, at Rapid City, Dr. A. S. Thompson shot a Green-winged Teal with his rifle. Although shot through the belly it was not killed, but flew with its entrails trailing, and it required a charge of dust shot to finish it. It was a male; length, 15; extension, 23; gizzard full of shell fish. This species is very abundant throughout the whole of the pondy prairie region from here to Carberry. It is usually met with in pairs and is of a very affectionate disposition, for if one be shot the other either remains to share its fate, or if it does fly at first, usually

returns almost immediately to the side of its mate. I found it an expert diver, for often one of them would disappear at the approach of the gunner and be seen no more; doubtless it had swam under water to the nearest reed-bed, in whose friendly shelter it was securely hiding.

On July 5, at Silver Creek, came across a female Green-winged Teal traveling with her brood of ten young ones across the prairie towards a large pool. The mother bird was in great grief on finding that she was discovered, but she would not fly away; she threw herself on the ground at my feet and beat with her wings as though quite unable to escape and tried her utmost to lead me away. But I was familiar with the trick and would not be beguiled. I caught most of the tiny yellow downlings before they could hide and carried them carefully to the pool, where soon afterward the trembling mother rejoined them in safety.

This species, I think, unlike the blue-wing, usually nests quite close to the water, so that it was probably owing to the drying up of the pond that this newly hatched brood found themselves forced to take an overland journey of considerable extent before they could find a sufficiency of water.

27. Anas discors. Blue-winged Teal.

Very abundant; summer resident; general distribution in the prairie regions; along the boundary, Mouse River, in fore part of August becomes very abundant; doubtless breeds (Coues). Winnipeg: Summer resident; abundant; breeding (Hine). Sparingly at Shoal Lake and Lake Winnipeg (Brewer). Swamp Island: 1885; breeds here; last seen August 26 (Plunkett). Shoal Lake, May 19, 1887 (Christy). Portage la Prairie: Very abundant; summer resident, and like the mallard nesting wherever it takes a fancy to do so; in 1884 first seen April 16 (Nash). Breeds abundantly around marshy ponds in the prairie country; exceedingly abundant in fall of 1880; rare in Assiniboine in September, 1881 (Macoun). Carberry: Common; breeding; Souris Plains, Turtle Mountain, Long River, Rapid City, and the whole south slope of Riding Mountain (Thompson). Dalton: 1889, first seen, one on April 18; next seen, May 15, when it became common; breeds here (Youmans). Shell River; 1885, first seen, a pair on May 2, afterwards every day; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds May 10 (Guernsey).

I have frequently remarked that during the breeding season this species may be seen coursing over and around the ponds in threes, and these when shot usually prove a male and two females. After dark they may be identified during these maneuvers by their swift flight and the peculiar chirping, almost a twittering, that they indulge in as they fly.

On August 19, 1882, at Markle's Lake, shot a Blue-winged Teal. This sheet of water is not more than 3 acres; it has hard banks, almost entirely without rushes or other cover, and is a mile or more from the

nearest pond. This duck is very abundant in the country, and I think it usually nests much farther from the water than any of its near congeners. Like the Green-wing it is a good diver, but it is less wary and more easily shot; it seems to prefer the smaller ponds and leaves the large sheets to the Mallard and other large ducks.

28. Anas cyanoptera. Cinnamon Teal.

Very rare; straggler; I have taken the Cinnamon Teal at Oak Lake, and I think also at Lake Manitoba, but during fifteen years' residence in Manitoba I have only seen five or six specimens (R. H. Hunter).

29. Spatula clypeata. Shoveler or Spoonbill.

Abundant summer resident, of general distribution; abundant throughout the region along the boundary from Pembina to the Rockies; breeding on Mouse River (Coues). Dufferin: Arrived between April 20 and 25 (Dawson). Winnipeg: Summer resident; abundant (Hine). Breeding at Red River, Shoal Lake, and Lake Winnipeg (Brewer). Swampy Island: 1886, first seen, six, on May 28; abundant summer resident (Plunkett). On Lake Winnipeg, the young were nearly full grown in the beginning of July (Bell, 1880). Shoal Lake: Breeding May 17, 1887 (Christy). Portage la Prairie: 1884, common summer resident; breeds in most of the sloughs near here; I have only once seen anything like a flock of these birds, and then there were not more than a dozen of them; they arrive late and depart as soon as the shallow waters they frequent are frozen; in 1884, first seen April 16 (Nash). Observed great numbers in August on the prairie ponds about Pleasant Hills; breeding on ponds throughout the prairie, but more abundantly throughout the copsewood region (Macoun). Brandon, Pembina, and Rapid City: Breeding (Thompson). Dalton: 1889, first seen, one on April 16; is common, and breeds here (Youmans). Shell River: 1885, first seen, a pair on May 8; next seen, four on May 22; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; May 1 (Guernsey). Trout Lake (Murray).

30. Dafila acuta. Pintail.

Common summer resident of general distribution; abundant throughout the region along the boundary westward from Pembina, in summer as well as in fall (Coues). Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Summer resident; abundant (Hine). Red River to Hudson's Bay (Blakiston). Breeds near Norway House (Bell, 1880). Osowa: Common; breeding; 1885, first seen, one on April 7, next seen April 16; became common April 20; last seen, thirteen, on November 1 (Wagner). Portage la Prairie: Abundant; summer resident; first seen in 1884, April 16; arriving early, generally with the Mallard, but leav-

ing much earlier, the first frost driving them out (Nash). Carberry: Tolerably common summer resident; breeding; Souris Plain, Turtle Mountain, Fingerboard, near Rapid City (Thompson). Dalton: 1889, first seen, about ten, on March 21; seen every day afterwards; became common on March 23; breeds here (Youmans). Brandon: April 9, 1882 (Wood). Breeding on the prairies south of Pipestone Creek (Macoun). Shell River: 1885, first seen, four, on April 20, afterwards seen every day, male and female; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds April 5 to 15 (Guernsey). Trout Lake Station and Severn House (Murray).

31. Aix sponsa. Wood Duck.

Rare summer resident; several small flocks in latter part of September, north of Red River, in Minnesota, feeding on wild rice (Kennicott). Rat Portage: October 10, 1886, found the head of a male Wood Duck lying on the shore (Thompson). Winnipeg: Summer resident; rare (Hine). I have seen the Wood Duck (*Aix sponsa*) at Westbourne, and it is always to be found along Cook's Creek, east of Winnipeg (Hunter). Portage la Prairie: A rare and local summer resident, but I think increasing; previous to September 21, 1884, I never saw any in this neighborhood, though I had heard that a few pairs always bred on the White Mud River, near Westbourne, on that day; I saw two on the Assiniboine the following year; two or three broods were raised here, out of which, in September, I shot several, and on the 9th of October I killed one of the handsomest drakes I have ever seen; its plumage was simply perfect (Nash). Observed on Lake Winnepegosis by Mr. Tyrrell (Macoun). Carberry: A single pair taken in 1883 (Thompson). Qu'Appelle: I know of one being shot here in five years (Guernsey). A male killed at Cumberland House, June, 1827 (Richardson). Mr. Hine, of Winnipeg, showed me some fine specimens taken at Lake Winnipeg; he described it as regular, though not common, in the mouths of such creeks as flow through the heavy timber into Lake Winnipeg; Devils' Creek is a favorite place, and here they are found feeding largely on the wild potato which grows on the overhanging banks, so that the bird may gather it without leaving the water; Hudson's Bay; Moose Factory; Trout Lake Station (Murray).

32. Aythya americana. Red-head.

Common summer resident; breeding abundantly throughout the region along the boundary from Pembina to the Rockies (Coues). Swamp Island: Breeds here; last seen September 11 (Plunkett). Winnepeg; summer resident; abundant (Hine). Breeding at Oak Point Lake, Manitoba, Shoal Lake, and Selkirk Settlement (D. Gunn). Portage la Prairie: Abundant; summer resident; breeding in all the lakes and large sloughs; I have frequently shot flappers on the 15th of August; they arrive as soon as the rivers are open and stay until no open water

is left; in 1884, first seen April 16 (Nash.). Breeds abundantly on the marshes of Waterhen River (Macoun). Carberry: Tolerably common; summer resident; breeding (Thompson). Shell River: 1885, first seen, a pair on May 3, afterwards seen every day; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; April 23 (Guernsey).

Oak Point. We procured some duck nests and among them were two *Aythya americana*, (Red-head ducks' nests), one containing eight eggs, the other nineteen. When I was there in 1865 we found one belonging to the same kind of duck containing nineteen or twenty eggs. The Indians accuse this duck of dishonesty, stating it to have very little respect for the rights of property, being inclined to rob other ducks of their eggs and place them in its own nest. This species and the canvas-back are both found at Shoal Lake and at Manitoba, but nowhere in great numbers. (D. Gunn.)

33. Aythya vallisneria. Canvas-back.

Uncommon; a few breed; at Turtle Mountain in July (at the boundary) I saw several broods of partly grown young; in most of the region, however, the bird is less numerous than the Red-head (Coues). Winnipeg: Fairly common on Lake Manitoba, but not generally breeding (Hine). Red River Valley: Transient visitant; rare (Hunter). Oak Point and Shoal Lake: breeding (Gunn). Swampy Islands: 1885, first seen, sixty, on May 19; next seen, May 20; last seen May 25; does not breed here; is very abundant in fall and spring amongst open places in ice on lake (Plunkett). Portage la Prairie: 1884, first seen April 16; common in spring, particularly if the lowlands should be flooded; in 1882, during the spring freshet they were abundant, in the autumn; they are less frequently seen; some, however, breed on Lake Manitoba, for on the 18th of September, 1886, I saw four young birds in a game dealer's shop in Winnipeg, the proprietor of which told me he had just received them from there, and a friend who knows the birds well also informed me that he had shot them on the same lake when they could scarcely fly (Nash). Qu'Appelle: Common migrant; April 23 (Guernsey).

I am positive that the canvas-back never breeds in Manitoba. I have shot in the spring every year for the past fifteen years, and have not seen ten canvas-back ducks during that time. I have occasionally shot them in the autumn, in the proportion of one canvas-back to two hundred other ducks. (Rich H. Hunter, in MSS., May, 1885.)

34. Aythya marila nearctica. American Scaup Duck. Big Blue-bill or Black-head.

Common migrant; a few breed. Dufferin: Arrived between April 25 and 30 (Dawson). Specimen in Smithsonian Institution, from Red River Settlement (Blakiston). Winnepeg: Abundant (Hine). Red River Valley: Abundant migrants, but I can not concur that it commonly breeds in Manitoba (Hunter). Breeding at Lake Winnipeg (D. Gunn). A few breeding in Lake Winnipegosis, June, 1881 (Macoun). Portage la Prairie: Fall migrant; common in spring, arriving as soon

as the rivers are open; not so frequently obtained in the autumn, principally, I think, because it confines itself to the large lakes, seldom visiting the creeks or sloughs at that season; it remains until it is frozen out; in 1884, first seen April 16 (Nash, in MSS.).

Carberry: Abundant; migrant (Thompson). Qu'Appelle: Common summer resident; breeds; arrives April 20 in flocks, with lesser Blue-bills and Ring-neck (Guernsey).

35. Aythya affinis. Lesser Scaup Duck. Little Blue-bill.

Abundant summer resident, of general distribution. Winnipeg: Abundant; breeding (Hine). Red River Valley: Abundant, chiefly in autumn; not commonly breeding (Hunter). Swamp Island: 1885, first seen, four, on May 12; next seen May 13, when it becomes common; is abundant and breeds here; 1886, first seen, two, on May 5; bulk arrived on May 11 (Plunkett). Shoal Lake: May 19, 1887 (Christy). Portage la Prairie: Abundant summer resident; breeding on all the prairie sloughs of any size; it arrives as soon as there is any open water, and remains so long as there is a hole in the ice big enough to hold it; in 1884, first seen April 16 (Nash). Breeding more commonly than the preceding (1881) (Macoun). Carberry: Abundant summer resident; breeding; Brandon, Souris Plain, south slope of Riding Mountain (Thompson). Shell River: 1885, first seen, two pair, on May 1; afterwards seen every day; it is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 20 (Guernsey). Severn House (Murray).

36. Aythya collaris. Ring-necked Duck. Marsh Blue-bill.

Tolerably common summer resident. Winnipeg: Summer resident; common (Hine). Swamp Island: 1885, first seen, six, on May 9; next seen, the bulk, on May 10; tolerably common; breeds here (Plunkett). Breeding in the marshes of Waterhen River, 1881 (Macoun). Portage la Prairie: Common summer resident; frequently confounded with the last, and they are both frequently more than confounded by persons who shoot them, for if there is only one kick left in them when they drop they will utilize that to such good purpose that they will get under cover beneath the water, where they conceal themselves so well that it is almost useless to try to retrieve them (Nash). Qu'Appelle: Common summer resident; breeds; arrives April 20 (Guernsey).

37. Glaucionetta clangula americana. American Golden-eye. Whistler. Tree Duck.

Rare summer resident. Winnipeg: Summer resident; tolerably common (Hine). Red River Valley: Summer resident; tolerably common; I have taken twenty-one eggs out of one nest in an old oak tree at Shoal Lake, near Winnipeg (Hunter). Swampy Island: 1885, first seen, six, on May 5; next seen on May 6; became common May 8; is

tolerably common, and breeds here (Plunkett). "Common Golden-eye or Tree Duck;" also breeds near Norway House (Bell, 1880). Portage la Prairie: Rare; summer resident; comes late and leaves early; is scarce in the shooting season; shot one in August, and as I see them more or less all summer, I assume that they breed here; arrives about the end of April and departs early; I have rarely seen one after the 1st of September; first seen April 27, 1885, April 20, 1886 (Nash). A few breed in the Waterhen River marshes (Macoun). Carberry: Very rare; summer resident; June 23, 1883; at a small lake in the woods to the south, to-day, I saw a Whistler, and I think the species breeds here (Thompson). Shell River: 1885, first seen, one, a male, on April 25; a transient visitor, passing north and not remaining any time or breeding (Calcutt). Qu'Appelle: Tolerably common summer resident; breeds; arrives April 15 (Guernsey).

38. **Glaucionetta islandica.** Barrow's Golden-eye.

I shot a brace at Lake Manitoba in 1879, and a drake at Shoal Lake in the spring of the following year; and I saw a drake which was killed at the mouth of the Red River (Hunter). Winnipeg: Rare; straggler (Hine).

39. **Charitonetta albeola.** Buffle-head.

Common summer resident; breeding in deep ponds that are fringed with trees; among the commonest species after the fall migration, along the boundary (Coues). Dufferin: Arrived between April 20 and 25 (Dawson). Winnipeg: Transient visitor; abundant (Hine). Swamp Island: 1885, first seen, about twenty, on May 21; next seen on May 22; last seen, May 25; is common in migration but does not breed; 1886, first seen, six, on May 10; bulk arrived May 13; last seen, May 19 (Plunkett). Portage la Prairie: Abundant in spring and autumn, some few remaining to breed; at Lake Champique, near Hedingly, I once found young, unable to fly, on the 15th of August; they were on a prairie slough, at least three miles from any trees (Nash). Abundant in ponds in the autumn; not seen in the prairie regions (Macoun). Carberry: Common summer resident; breeding also at west slope of Duck Mountain, Portage la Prairie (Thompson). Shell River: 1885, first seen, two, on April 27; next seen, May 20; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives September 20 (Guernsey). Severn House; Trout Lake Station (Murray).

40. **Clangula hyemalis.** Old squaw. Swallow-tailed Duck. Coween.

Severn House (Murray), and during winter found in many parts of the Mississippi valley (Cook), therefore probably Manitoban.

41. *Histrionicus histrionicus.* Harlequin Duck.

This bird will probably be found in Manitoba, as it has been recorded from near Hudson's Bay (Hutchins). Breeds in British America; * * * throughout Illinois in winter, and has been taken at St. Louis, Missouri (Cooke). Breeding in the Rocky Mountains, near the boundary (Coues).

Pow is tic on sheep; two specimens, both drakes, etc. * * * These birds are found in small rivulets, seldom in large rivers, about 90 miles inland. They migrate to the southward with the geese; feed on grass and small worms at the bottom of the creeks; have a whistling note; they build their nests in the grass, and lay ten or more eggs, resembling those of a pigeon in size and color. The name in the Algonquin language implies a species of ducks that frequent the waterfalls or cataracts. The young brood are very prettily speckled. (Hutchins MSS. Obs. H. Bay, 1782.)

42. Oidemia americana. American Black Scoter.

Rare; migrant. Winnipeg: Transient visitor; rare (Hine). Swampy Island: "Black Duck," 1885, first seen, four, on May 19; next and last seen on May 20; is rare here and does not breed (Plunkett). Trout Lake (Murray).

43. Oidemia deglandi. White-winged Scoter.

Rare; migrant; possibly breeding. Winnipeg: Summer resident; tolerably common; Lake Winnipeg (Hine). Red River Valley: Transient visitor; tolerably common on rocky localities (Hunter). Occurs between Hudson's Bay and Lake Winnipeg (Murray). Near Russell, July 6, 1882; Bitter Lake, Washington, shot a velvet scoter, female; length 20, extension 36; all over dusky; bill gray; a light patch near bill and one behind eye; secondaries white; legs dull reddish; apparently breeding (Thompson). Qu'Appelle: Common; migrant; May 1 (Guernsey). Trout Lake Station; Severn House (Murray).

44. Oidemia perspicillata. Surf Duck or Surf Scoter.

Uncommon; migrant; common at Lake Winnipeg (Hine). Qu'Appelle: Rare migrant; May 1 (Guernsey). Red River Valley: Tolerably common; transient visitor; abundant (Hunter). A specimen from Nelson River in the Smithsonian Institution (Blakiston).

45. Erismatura rubida. Ruddy Duck.

Summer resident; breeding; common and breeding in suitable places throughout the region along the boundary; at Turtle Mountain nesting in numbers in the pools (Coues). Winnipeg: At few are seen each year about Long Lake when it breeds; also Lake Winnipeg, and at Shoal Lake (Hine). The Ruddy Duck is sometimes found in swamps near the Red River, but they are more numerous at Shoal Lake and Manitoba (D. Gunn). Portage la Prairie: Shot a female here September 10, 1884; she was with two buffle-heads at the time (Nash). Seen at

Touchwood Hills in September, but not in Manitoba (Macoun). Shell River: 1885, first seen, one male, on May 23; breeds here; flaps for a few yards on the water and spreads its tail and shakes its head like a fan-tail pigeon (Calcutt). Qu'Appelle: Common summer resident; breeds May 1 (Guernsey).

46. Chen cærulescens. Blue Goose.

Winnipeg: Rare; transient visitant (Hine).

47. Chen hyperborea. Snow Goose; White Wavy.

Abundant spring migrant; less common in the fall; abundant during migration along the boundary (Coues). Winnipeg: Transient visitor; abundant; going north to breed (Hine). Red River Valley: Transient visitor; abundant (Hunter). Swampy Island: 1885, first seen, four, on May 7; next seen on May 10, after which it disappeared; never common; does not breed, and is rare on this lake (Plunkett). Migrant at Shoal Lake (Gunn). Ossowa (Wagner). Portage la Prairie: 1884, abundant spring visitor to the large grass marshes near Portage la Prairie, but rarely seen in the autumn in that neighborhood; near Winnipeg it is, however, not uncommon in October; first seen April 23, 1884 (Nash). Carberry: Seen in enormous numbers in spring, and in much less numbers in the fall (Thompson). Little Saskatchewan, near St. Martin's Lake: Wavies, as the half-breeds term them (Wa-wain Cree) (*Anser hyperboreus*), flying to the south early this morning in large flocks, were regarded as a sure sign of approaching winter (Sept. 27, 1858, Hind). Two Rivers: 1885, first seen, one, on April 6; next seen, four, on April 18; migrant (Criddle). Qu'Appelle: Transient; passing over May 3 to 28 (Guernsey). Severn House (Murray).

In Hudson's Bay they are the shyest and most watchful of all the species of geese, never suffering an open approach, not even within two or three gunshots. Yet in some of the rivers near Cumberland House and at Basquian the Indians frequently kill twenty at one shot; but this is only done in moonlight nights, when the geese are sitting on the mud and the sportsmen are perfectly concealed from their view. (Hearne, 1795.)

In April the ducks and geese return in great numbers, become plentiful, and feed in numerous flocks in all the marshes fringing the lakes for at least a month and a half. The gray geese and ducks draw off by degrees in May, but the white geese (wawee) come generally in the last week of April, and begin to clear away for Hudson's Bay on the 13th or 14th of May, where they invariably arrive on the 15th of May. The last of them leave here from the 20th to the 25th of the same month. (D. Gunn.)

These birds pass over the country in countless numbers each spring, generally arriving in large bands about the 15th of May, although I have seen stragglers as early as the 28th of April. A great number of immense flocks generally remain in the Province for a couple of weeks to "take in sand" and feed. They are very easily shot while on the gravel grounds: they appear very stupid (*i. e.*, in the morning and evening). When not taking in sand and gravel they are very difficult to approach and are as wary as any geese. These birds are rarely seen in the autumn. The half-

breeds say that they do not pass over Manitoba on their return, but take a more western course. Although I have spent two weeks every October for the past 15 years in shooting, I have never seen more than an occasional flock of perhaps fifty birds in the autumn. (Hunter, in MSS.)

48. **Anser albifrons gambeli.** American White-fronted Goose. Laughing Goose. Specklebelly.

Winnipeg: Migrant; transient visitor, rare (Hine). *Anser frontalis* of Baird from Red River Settlement (Blakiston). Ossowa: Migrant; May 11 (Wagner). Shell River, 1885, first seen, eighteen, on April 10; a transient visitor, passing north and not breeding or remaining any time (Calcutt). Near Long River, May 19, 1882, C. T. shot a pair of White-fronted Geese, but secured only the male; length, 27½; extension, 58; testes but little developed; gizzard full of young shoots of aquatic plants; a peculiar wart or excrescence grew on the tibio-tarsal joint. No others of the species were seen (Thompson). Near Cumberland House and Basquiau they are found in such numbers that the Indians in moonlight nights frequently kill upwards of twenty at a shot (Hearne, 1795).

49. **Branta canadensis.** Canada Goose. Wild Goose. Wavy.

Abundant; migrant; a few breed; common at boundary along Mouse River in late September (Coues). Winnipeg: Summer resident; abundant; a few breed (Hine). Red River Settlement: April 2, 1856, April 1, 1858 (Blakiston). Red River Valley: Abundant in migration; a few breed (Hunter). Breeding on Lake Winnipeg in June (Kennicott). Swamp Island, 1885: First seen, eighteen, on April 14; next seen April 15, when it became common; breeds here; in fall; last seen September 23, 1886; first seen, four, on April 8; bulk arrived April 16 (Plunkett). Ossowa: Common; breeding, 1885; last seen, fifteen, on November 28 (Wagner). Oak Point, 1885, April 7 (Small). Portage la Prairie: Common in spring and fall; a few breed in the marshes near Lake Manitoba; arrives about the middle of April or before should there be open water; departs when all the lakes and rivers are frozen over, usually about the 10th of November (Nash). In 1879, breeding on the Assiniboine, where Brandon now is; also above the rapids (Macoun). Two Rivers, 1885: Great flight April 1; next April 3; common in spring and fall (Criddle). Brandon: Two young taken on the river August 25, 1882 (Wood). Dalton, 1889: First seen, about fifteen, on March 21; next seen on March 22; became common on March 26; was last seen May 10; rarely breeds here (Yoemans). Shell River, 1885: First seen, fifteen, on April 9; afterwards seen nearly every day in the migrating season; odd pairs breed near here (Calcutt). Qu' Appelle: Common summer resident; breeds April 1 to 10 (Guernsey). Carberry: Abundant in migration; rarely breeding south of Souris River; migrant; breeding near Shoal Lake, west (Thompson).

On October 4, 1883, near Shoal Lake, west, I chanced to call at the home of Mr. McMillan, a farmer. There was a flock of six full-grown tame Canadian Geese feeding about the door. Mrs. McMillan informed me that in the spring they found the old goose nesting in the slough near by. The bird was shot, and her seven eggs brought into the house and laid by the stove during the daytime, and at night they were wrapped in flannel and put away. At length they began to hatch. The good wife assisted six of the goslings into the world, but, fearing she had done wrong, allowed No. 7 to work his own passage. The six lived and throve, while No. 7 died. (In the spring of 1884 she still had the brood of swan-like birds; they were living in the barnyard in a state of perfect domestication.) The fact that these eggs must have been chilled nightly, and in the daytime exposed to a dry, unnatural heat, shows the wonderful vitality possessed by wild eggs.

Another farmer, living near Carberry, added some geese to his barnyard in the same way, but, I believe, they did not breed in confinement.

49a. Branta canadensis hutchinsii. Hutchins's Goose.

In September a very small young bird, taken on Red River by Robert Kennicott (Baird). Portage la Prairie: Common in spring and fall only; have not been able to discover that it breeds near here (Nash).

50. Branta bernicla. Brant.

Migrant; observed only during the migration along the boundary (Coues). Winnipeg: Transient visitor (Hine). Red River Valley: Transient visitor; I have taken it at Shoal Lake (Hunter). Carberry: Observed as a migrant; not common; no specimen taken (Thompson).

51. Olor columbianus. Whistling Swan.

Occasional about the large lakes; not demonstrated to breed. Winnipeg: Transient visitor; rare (Hind). Oak Point, 1884: Arrived May 4 (Small). Always seen in flocks high up (Macoun). Portage la Prairie: In the autumn of 1886 saw one that had been shot on Lake Manitoba, and in previous years have seen this or the next species there myself (Nash).

Some years ago, when I built Cumberland House, the Indians killed those birds (swans) in such numbers that the down and quills might have been procured in considerable quantities at a trifling expense. (Hearne, 1769–1772.)

52. Olor buccinator. Trumpeter Swan.

Rare migrant; observed on a few occasions in Dakota late in September and in the first half of October during the migration; said to breed in Minnesota (Coues). Winnipeg: Transient visitor; rare (Hine). Swamp Island, 1886, first seen, eight, on May 1; bulk arrived May 6; last seen May 10; tolerably common this year (Plunkett). Portage la

Prairie: Occasionally seen in spring and autumn, I am informed, but as I never actually identified the bird myself I am not positive about it (Nash).

53. Botaurus lentiginosus. American Bittern.

Common summer resident in all extensive marshes; apparently rather common on Mouse River, at the boundary, in September (Coues). Dufferin: Arrives between April 25 and 30 (Dawson). Morris: Often seen April 29, 1887 (Christy). Winnepeg: Summer resident; abundant (Hine). A specimen in Smithsonian Institution, from Nelson river (Blakiston). Ossowa: Breeds (Wagner). Oak Point: 1884, arrived May 15 (Small). Portage la Prairie: Common summer resident; first seen May 17, 1884; May 22, 1885; April 19, 1886; last seen October 16, 1884 (Nash). Abundant in all marshes throughout the country; shot June 11, 1881 (Macoun). South slope of Riding Mountain, on Little Saskatchewan, August 28, 1858; in the marshes, herons, cranes, and bitterns were distributed in groups (Hind). Carberry: Common; southern slope of Riding Mountain, abundant; Portage la Prairie; Sewell; Fort Ellice; Rat Portage, 1886 (Thompson). Shell river 1885, first seen, one on May 4, afterwards seen every day; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 21 (Guernsey). Severn House (Murray).

On May 23, 1884, at Sewell Plain, heard a bittern pumping in the slough after dark; the sound has been very aptly likened to the syllables "pump-o-ga;" the first two notes are like the stroke of a pump, the last is exactly like the swish and gurgle of water in a deep pipe. This sound is not at all ventriloquial, as is that of the European Bittern according to many accounts, and I had no difficulty in following and flushing the bird, but it was too dark to shoot, as I could only see the dim form against the sky when it rose after flying, apparently 50 yards, and presently he was heard again working his pump in the distance.

On June 2, on the south slope of the Riding Mountain, I was led to a bittern, after sundown, by its pumping; I watched it catching insects until dark, and then shot it, and found in its stomach a most miscellaneous collection of insects, etc. Same day, near the Fingerboard, I traced a bittern by his note in the evening, and shot him; ♂ adult; stomach contained crawfish, insects, a garter-snake, a mouse, and a menobranchus.

June 3, at Rapid City Trail, south slope of Riding Mountain. The bittern is one of the commonest of the large birds that are to be found in this region. Its long brown form on flagging wing, with beak pointed one way and legs another, is to be seen flying over nearly every extensive slough of this region. Suddenly, in the midst of his flight, he may be seen to dangle his legs, "reverse action" his wings, and drop into the marsh. There, for a moment, he stands, not deigning to notice the blackbirds that are trying to terrify him into a retreat, his long neck

straight up at full length. Then, having satisfied himself that all is right, he touches a hidden spring, and instantly the preposterous neck is tucked away somewhere in a surprising way, and so effectually that the head looks as though stuck on the shoulders without any intervening structure at all.

In taking its prey the bird either waits until the rash victim comes within reach of its spear-like bill or goes stalking about after it among the rushes. Its food is of such a varied character that one only has to collect the stomachs of about a score of bitterns to have an extensive natural history museum. The specimen taken yesterday contained, as already stated, a garter-snake, a mouse, an amblystoma or water lizard, sundry crawfish, and an innumerable company of various insects; and to this list may safely be added every kind of small animalism that may be secured about the marshy home of the bird. Misled by sundry printed statements, I once cooked an individual of this species, but will not be so misled any more. It is sufficient to say that it tasted of all the creatures it feeds on.

I have somewhere read that this bird is strictly diurnal. This I have long doubted. Indeed, I begin to doubt that any bird is strictly anything. When we find a hawk gorging itself with choke cherries, a night-owl hunting by sunlight, and sandpipers that never pipe or go near sand, one is prepared to give up, on behalf of the birds, all rules of life and conduct, and expect the strictly "diurnal" bittern to be up and stirring during the hours of darkness and gloom, as, indeed, the foregoing notes lead me to suspect he does.

Contrary to the usually expressed opinion, this bird is strictly diurnal in its habits; quitting its resting places in the reedy bogs early in the morning, feeding out along the margins of ponds, streams, etc., during the day, and returning to its close cover at night. When alarmed, the bittern, instead of rising, frequently erects its head and neck and depresses its tail between its legs, until the whole body is almost vertical, and so stands perfectly still until the danger is past; when in this position it so closely resembles a dead branch that it requires a practiced eye to detect it. Bitterns are most frequently heard to boom or pump in the spring, but I have also heard them all through the summer; the latest date being in August. (Nash.)

54. Botaurus exilis. Least Bittern.

Accidental visitant. Winnipeg: Summer resident: only one specimen in 10 years in Manitoba (Hine).

55. Ardea herodias. Great Blue Heron.

Uncommon summer resident, of erratic distribution; common summer resident in all Red River Valley; not noted by me anywhere in the Assiniboine region; observed during our passage down the Red River to Pembina (Coues). Pennawa River, September, 1887 (Hind). Winnipeg: Summer resident; tolerably rare (Hine). Red River Valley: Summer resident; common at Shoal Lake, township 16, range 3, east

(Hunter). Portage la Prairie: 1884; rare; summer resident (Nash). South slope of Riding Mountain, on Little Saskatchewan River: In the marshes herons, cranes, and bitterns were disturbed in groups (Hind). Occasionally seen, but not very common; shot on Swan River, April 28, 1881; not observed breeding (Macoun). Breeding in numbers on Riding Mountain (Green). Qu'Appelle: Tolerably common; summer resident; breeds; arrives May 6 (Guernsey).

My summer of 1880 was spent in the Northwest Territory of the Dominion. The 20th of July last found me in the Duck or Riding Mountain, at the headwaters of Bird's Tail Creek, about 51° north, and on the one hundred and first meridian. These mountains are covered with a dense forest of tall poplars and birch and thick underbrush of hazel and raspberry, making it impossible to get through without cutting a trail in advance. This 20th of July was a very hot day. We had started at 6 a.m. with a train of thirteen heavily loaded carts, and by 11 a.m. had made about 3 miles, when a very peculiar noise saluted our ears. Knowing this forest to be full of bears, we at once came to the conclusion that we were in the vicinity of a family (sisters, cousins, and aunts) of those affectionate creatures. The train was ordered to halt while the chief of the party and myself went forward to prospect. As we advanced the noise grew louder and louder, till we called a council of two to decide what had better be done—face the enemy or draw on our reserves and advance in full force. While deliberating, the chief happened to cast his eyes heavenwards and the mystery was explained. We had struck a heronry; hundreds of these birds were passing to and fro; and on going forward a hundred yards or so we found the tops of the poplars covered with their nests, the young birds, full grown but not able to fly, perched on the highest branches of the trees. Here in the heart of a dense forest, probably never trodden by man before, were thousands of nests of our common Blue Heron (*Ardea herodias* Linn.) We cut down several trees and captured the young, which were cooked and eaten by some of our men with relish, probably because it was the first fresh food for three months. The nests were made of the small dead branches of the poplar and were placed as near the tops of the trees as possible. I kept two of the young birds alive for a few days, when, becoming able to fly, they took their departure.

These mountains are full of small ponds and bottomless marshes, which swarm with lizards and small fish, on which the herons feed, and on getting to an open space near the heronry we could see the old birds coming and going in every direction. Those coming home were stuffed to the bill with food for their young, making them present a very ungainly figure, as they lazily flopped their way towards the woods. On pushing our way through this mountain forest, we discovered three good-sized lakes, about one-half mile wide, and from 1 to 2 miles in length each. We tried them for fish, but only caught a few common chub.

56. Ardea virescens. Green Heron.

Rather common in the Assiniboine, near the mouth of Shell River, September 25, 1881. This was certainly a heron, and was certainly not the Night Heron, as it was much smaller; it had no plumes, and was green on the wing shoulders; there were at least a dozen of them; they were in the trees along the river, not far from Mr. Henry Denmark's house (Macoun). Taken them at Shoal Lake, near Winnipeg, and am told that they breed in the sloughs around Turtle Mountains; they are rare compared with the number of Blue Herons (R. H. Hunter).

57. **Nycticorax nycticorax nævius.** Black-crowned Night Heron.

A somewhat common summer resident in Red River Valley; one individual seen during our passage down Red River to Pembina (Coues). Winnipeg: Summer resident, tolerably common, especially about Reaburn Marsh in August and September (Hine). In great numbers at Shoal Lake, nesting among the reeds (D. Gunn). Red River Valley: Summer resident; common (Hunter). I have seen several specimens that were taken near the southeast end of Lake Manitoba; have never seen any on the Big Plain (Thompson). Shell River: 1885, first seen, one, on May 16; a transient visitant; not breeding here (Calcutt). I never met with it in six years of observing near the Red and Assiniboine Rivers (Nash).

I may here observe that great numbers of Night Herons breed here. They fix their nests to the reeds 8 or 9 inches above the water and deposit in each 4 or 5 roundish blue eggs. I think this is the only place in Rupert's Land where this species is found. We gave them the "go-by" last summer. The Indians call them Kitché geskman, *i. e.*, big king-fisher. (D. Gunn.)

58. **Grus americana.** Whooping Crane. Flying Sheep.

Tolerably common migrant and rare summer resident; frequent in Mouse River country in August, September, and October (Coues). Winnipeg: Summer resident; tolerably common (Hine). Oak Point: 1884, arrived May 1, 1885; first seen, three, on April 15; next seen on April 17; is common and breeds here (Small). Rare summer resident near Westbourne, arriving in April; seen all summer (Nash). Carberry: In migrations only; rare; have seen specimens from Shoal Lake, where it is said to breed (Thompson). Breeding in the marshes between Moose Mountain and the Pipestone (Macoun). Shell River: 1885, first seen, two, on April 30; next seen, a pair, on May 3; a transient visitant, passing north and not breeding (Calcutt). White Sand River (Christy). Qu'Appelle: Transient, passing over; April 28 to May 1 (Guernsey).

On April 19, 1882, saw two Whooping Cranes; the residents call them "Flying Sheep." They flew at a great height and were loudly croaking.

This beautiful bird is common in the Qu'Appelle Valley and in the Touchwood Hill range. It is a dangerous antagonist when wounded, striking with unerring aim and great force with its powerful bill. When the bird is wounded, the best way to avoid its attacks is to present the muzzle of the gun as it approaches; it will fix its bill in the barrel, and may then be destroyed without danger. Instances have been known of this bird driving its bill deep into the bowels of a hunter when not successful in warding off its blow. (Hine.)

59. **Grus mexicana.** Sandhill Crane.

Tolerably common summer resident; common along the boundary after leaving Pembina; breeding (Coues). Winnipeg: Summer resident; tolerably common (Hine). Dufferin: Arrives between April 25

and 30 (Dawson). Swamp Island: 1885, first seen, one, on June 10; rare and does not breed here; in fall, last seen September 7; 1886, first seen, two, on May 1; bulk arrived May 3 (Plunkett). Norway House (Bell, 1880). Oak Point: 1884, arrived April 19, 1885; first seen, two, on April 15; next seen on April 16; is common and breeds here (Small). Portage la Prairie: Tolerably common summer resident; breeds near here; arrives in April; first seen in 1884, April 21 (Nash). Carberry: Common; in migration, a few breed; also at Fingerboard, Shoal Lake, west, and Russell (Thompson). Assiniboine, near the White Sand, and at the mouth of the Shell, 1881; also, saw young ones near Moose Mountain, June, 1880 (Macoun). Two Rivers: 1885, first seen, two, on April 16; next seen, one, on April 19; became common April 23; is pretty common here and breeds (Criddle). Dalton: 1889, first seen, one, on April 12; next seen on April 13, when it became common (Youmans). Shell River: 1885, first seen, two, on April 19; seen every day afterwards; is common all summer and breeds here (Calcutt). White Sand River in May (Christy). Qu'Appelle: Transient; passing over, April 28 to May 1 (Guernsey). Trout Lake Station (Murray).

The first intimation that we usually have of the advent of the crane is the loud trumpeting or croaking that seems to shake the air for miles. But soon we begin to see the birds themselves, usually in pairs, even at this early season. Their food now is chiefly rosepips, and as they stalk over the bare plains gathering this manna of the feathered race, ample opportunity is offered for observation. At first one sees little to note beyond their excessive wariness, but as the warmer weather quickens their feeling, these majestic stalkers, these stately trumpeters, may often be seen so far forgetting their dignity as to wheel about and dance, flapping their wings and shouting as they "honor their partners," and in various ways contrive to exhibit an extraordinary combination of awkwardness and agility. This dance is no doubt one of the courting maneuvers, for I have observed it only during the pairing season.

It has been asked if these cranes breed in communities. To this I reply, I never saw anything to lead me to such a conclusion; all cases of their nesting that have come under my notice were those of isolated pairs.

The localities they select are generally damp meadows, not necessarily near the sand hills, the chiefly desired surroundings being rank grass wherein to forage, and scrubby or undulating land for cover.

When first they enter the wide world the two or three young ones are provided with a coat of reddish yellow down and an apparently superfluous length of limb. I perceive by reference to authorities, that the cranes are "præcoces," which being interpreted meaneth "they are clothed and can run and feed themselves as soon as hatched." Not having seen the young cranes at this interesting period, I can not gainsay the above statement; but know that a young one taken at the end

of June, and evidently 2 or 3 weeks old, made such a poor attempt at walking that he reflected but little credit on the noble order of præcoces to which his family belongs. And yet I must admit that when I first came on him he ran with very fair speed, and as his parents contrived to monopolize my attention for a time he escaped into the scrub, but later on was found squatting as still as death. He looked then deceptively like a red rabbit or a small fox. On being touched he sprang up uttering a gentle "peeping" which contrasted strangely with the strong croaks of his parents. He ran for a few yards with the grace and celerity of a Cochin fowl, but soon weakened and was obliged to sit on his heels.

I took him home and found that he spent fully half his time in this elegant position, and that, moreover, although he ate well and seemed in good health, he was scarcely able to stand erect excepting in the heat of the day, and when he attempted to rise he was almost sure to fall once or twice through his neck getting entangled with his shanks in a most unprækocial manner; nevertheless, he grew and fledged and became quite tame. Then came two other pets to share the building wherein he had so long dwelt alone; they were a Peregrine Falcon and a Swainson's Buzzard. For a time all went well; the crane seemed to have strength enough and beak enough to take care of himself. Then I found out that he would even share the Falcon's food, so I offered him a sparrow; he seized it savagely and, uttering a peculiar harsh note, pinned it to the ground with his bayonet-like bill, then stabbed it again and again, and at last, having reduced it to a shapeless mass, he swallowed it. So that, although I have found only berries, grain, grass, and insects in the gizzards of old ones so far, I think it is likely that they will also eat frogs, mice, or small birds.

How it came about I never could tell, but one morning after a storm I found the peregrine sitting on the dead body of the crane; I did not at once remove it, and when I came again the two bandits had nearly eaten my gentle pet.

Several of the neighbors also have tried to rear young cranes and almost always with success and satisfaction, for, although it is difficult to keep them over winter, they become so tame and are so interesting during their stay that their owners feel amply rewarded for what little trouble they have taken with them. As a game bird I am inclined to place the present species first on the Manitoban list, as the White Crane and the swans are too rare for insertion on a list of species that the sportsman may pursue with regularity and success. An average specimen weighs about 9¾ or 10 pounds, and the quality of the flesh is unsurpassed by that of any of our ordinary birds unless it be the partridge. I should strongly advocate the protection of this bird by the game law were it not that it is so thoroughly well able to take care of itself that legislation in its favor seems altogether unnecessary.

The young cranes are apparently strong on the wing in August, for

at this time small bands of the species may be seen sailing high over the prairie, apparently strengthening their wings before they are compelled to journey southward for the season. As September draws nigh their numbers are increased, and the long array of the grand birds present a most imposing spectacle as in serpentine lines they float away after the sun.

60. Rallus elegans. King Rail.

Mr. Hine claims to have seen this near Winnipeg. At Carberry I once got a flying glimpse of what I took for this bird, but it was 30 yards away, and I failed to get either a second glimpse or a shot at it (Thompson).

61. Rallus virginianus. Virginia Rail.

Winnipeg: Common summer resident (Hine). ? Nest found at Carberry (Thompson).

The fine specimen of this bird in Manitoba Museum, taken at Reaburn, where, Mr. Hine says, it is plentiful. It is, no doubt, more common in this country than is generally supposed; for, as Dr. Coues remarks, "their habit of skulking and hiding in the most inaccessible places they frequent, renders them difficult of observation, and they are usually considered rarer than they really are." The call of this species is rendered "*crik-cuk-rik-k-k-k.*" It is said to be partially nocturnal.

A nest was brought to me from a slough near Carberry, July 30, 1884. It was found in a tussock of coarse grass, and was built of dry stems of the same; the eggs, eight in number, were quite fresh, and differed from those of the Carolina Rail only in being of a lighter color, and with reddish instead of umber spots, and chiefly about the large end; one was $1\frac{1}{4}$ by $\frac{15}{16}$, the others similar. The nest was of rushes and built precisely like that of the Carolina bird, but it was situated rather in a damp meadow than in a marsh. I did not see the bird, but have little doubt that it was the present species.

Mr. Nash sends the following note: "It haunts low ground like the rest of the order, but, so far as I have seen, they never go into deep-water marshes; in fact, they keep where there are bushes and low trees—alders, willows, and the like; and, when flushed, instead of taking to the rushes, they invariably fly in amongst the bushes."

62. Porzana carolina. Sora. Common Rail.

Common summer resident of all marshes. In September along Mouse River, at the boundary, appeared to be rather common (Coues). Winnipeg: Summer resident; abundant (Hine). Red River (Brewer). York Factory (Bell). Portage la Prairie: Very abundant summer resident; arrives about the middle of May; leaves about the end of September (Nash). Carberry: Abundant summer resident; breeding; and in the

country from Fingerboard to Birtle, nesting; very abundant; breeding in Duck Mountain, June, 1884 (Thompson). Shell River: 1885, first seen, two, on May 12; is common all summer and breeds here (Calcutt). Severn House (Murray).

June 28, 1882, at Rapid City Trail near Fingerboard, found the nest of a Sora. It contained fourteen eggs, which were within a few days of being hatched. The nest was placed in a bed of rushes, about 10 feet from the water, and was built of dry stalks of reeds, etc. The eggs were placed in two tiers, one on the other, as the nest was but 4 inches across. The question naturally suggests itself, however, how does this indefatigable little ovipositor contrive to warm the whole of this large clutch under her own little bosom and wings?

Late in the autumn, just before migrating, this bird develops startling powers of flight, though I am inclined to believe it does not rely entirely on its wings in its travels to and from its winter quarters, for just about the time of departure it may be found in most unlikely places; and it is just possible that when so found it may have been traveling southwards on foot. (Nash, in MSS.)

63. **Porzana noveboracensis.** Yellow Rail. Water Sparrow.

Summer resident. Winnipeg: Summer resident; tolerably common (Hine). Fort George (Bell). Hudson's Bay (Hutchins). In a marsh near Fort Pelly I saw a few that I took to be this species; they would fly and drop in the sedge; did not collect any (Macoun). At Carberry there is a small rail that is very common, but whether this or *P. jamaicensis* I can not be sure (Thompson).

On April 29, 1882, in the evening, while walking in the moonlight, by the slough, with W. Brodie, we heard a peculiar "tap-tap-tap"-ing that seemed to come from something in the near sedge. When we described the sound afterwards, at the house, old residents said it must have been a Stake-driver.

(Since writing the above I have become quite familiar with the Stake-driver, or bittern, and know now that the tapping was certainly not produced by it. This peculiar sound is a characteristic one of Manitoban marshes, and, unless it is the sound ascribed by Hutchins to the Yellow Rail, and described as resembling the striking of a flint and steel, I am at a loss to account for it.)

On August 3, 1883, a specimen of a little dark rail was brought to me. I put it, along with two young Killdeer Plovers, into a pen, wherein was already a Brahma hen with a large brood of young prairie chickens. As soon as the hen descried the strangers she made a dash and cruelly ill-treated one of the gentle killdeers before I could interfere; then she saw the rail gliding through the grass and ran towards it with murder in her eye and fight in every feather. But the rail ran to meet her. Both flew up together—the diminutive rail and the vast Brahma hen. The rail rose high enough to give the hen one peck on the head with his beak, and immediately a change took place. The hen straightened

her feathers, became a "peace-at-any-price" partisan, and never after took the slightest notice of the tiny Porzana. It finally escaped through a hole less than an inch across. It was almost impossible to hold it in the hand, so great was its power of forcing its body through the smallest opening.

This rail I took for *Porzana jamaicensis*, but had delayed making a careful diagnosis to a more convenient season, which never came, for the bird disappeared on the first night of its captivity; so that I do not consider the identification at all safe. It may have been *P. noveboracensis*. One is as likely as the other, and I believe both will yet be found in the province. Certain it is that a little rail, other than the Carolina, is often flushed in the rushes, and flies with its legs dangling; never, however, for any great distance; generally, it merely dashes out of the sedge at one place and along a few yards to drop into another. Its diminutive size and aquatic habits have, in some localities, procured for it the name of Water Sparrow.

64. Fulica americana. American Coot.

Common summer resident; extremely abundant along the line from Pembina to the Rockies; breeding (Coues). Dufferin: Arrived between April 25 and 30 (Dawson). Winnipeg: Summer resident; abundant (Hine). Oak Point: Arrived May 9 (Small). Lake Manitoba (Brewer). Portage la Prairie: Very abundant summer resident, arriving in May, departing early in October; first seen in 1884, May 6 (Nash). Carberry: Summer resident; not common; plain south of Souris River; Minnedosa, common; Portage la Prairie, abundant in fall (Thompson). Abundant on all pools of fresh water in the prairie region, with grebes; not common in the forest region (Macoun). Dalton: 1889, first seen, eight, on April 18; next seen on April 21, which was also last seen; common, but not breeding (Youmans). Shell River: 1885, first seen, a pair, on May 12; afterwards seen every day all summer; is common; it breeds here; nest found with thirteen eggs (Calcutt). Qu'Appelle; Common summer resident; breeds; arrived May 6 (Guernsey).

On June 25, 1884, in a pond 10 miles west of Minnedosa, I saw four coots engaged in a curious set-to. They might have been fighting, or merely playing. They were close together, and all were splashing the water about, flapping their wings and bobbing up and down; they faced each other, but never seemed to strike each other, so far as I could see. I have several times seen this performance in the spring time.

The migration of the coot is very singular; late in the autumn I have seen these birds in countless numbers in the marshes at the south end of Lake Manitoba; for a few days previous to their going they keep up a ceaseless chatter and row, apparently discussing the propriety of leaving. On my going out some morning after this has gone on, not a single solitary coot is to be seen, except perhaps a wounded one that can not fly; they are unlike other birds, only migrating at night. I have never seen a flock of them in the daytime. These marshes of Lake Manitoba appear quite

solitary after these birds are gone, although there are thousands of other birds there. (R. H. Hunter in MSS.)

Arrives early in spring, as soon as the ice goes out, and remains until it freezes up entirely, often staying about open holes in the ice until the last drop of water has disappeared from sight. On its first arrival in the spring and throughout the breeding season its habits much resemble those of the true rails, and it is continually skulking and hiding among the rank vegetation in which it resides; but after the young have acquired strength and confidence in themselves a change takes place in their habits. They now gather into large flocks (several times I have seen over a hundred together) and betake themselves to the open water, where they may be seen swimming and diving, like a lot of blue-bills or red-heads, rather than rails; at this time they will, if approached, rise high in the air and make long flights over and around the marsh they inhabit; this they will do all day long, but at dark they retire into the high rushes to roost. All the other birds of this family I have found at times in dry grassy meadows or amongst low scrub, but the coot never seems to leave the more watery parts of the marsh. (Nash in MSS.)

65. Phalaropus lobatus. Northern Phalarope.

Irregular migrant. Winnipeg: Transient visitor; not common; appears in spring and fall about Reaburn marshes (Hine). Common autumn visitor to Portage la Prairie, and very abundant at the prairie sloughs near Winnepeg, where I saw immense flocks of them in August and September, 1886 (Nash).

66. Phalaropus tricolor. Wilson's Phalarope.

Summer resident; breeds throughout the country from Red River to the Rockies along the line; in suitable places common, though never observed in large numbers at any one place (Coues). Winnipeg: Common on the prairies in spring; breeding at Seaborn and Lake Winnipeg (Hine). Eighteen miles south of Brandon, a pair observed June 15, 1882 (Wood). Breeding around ponds at Moose Mountain, July 24, 1880 (Macoun). "*P. lobatus* Qrd," Severn House (Murray).

June 15, 1887, 18 miles south of Brandon, saw a splendid pair of (Wilson's) Phalarope swimming on a pool only a few yards away; one of them kept rising and flying around, and I could distinguish the beautiful red and black neck quite plainly. (Wood).

67. Recurvirostra americana. American Avocet.

A western bird, very rare in Manitoba. Winnipeg: Rare; straggler along the Red River (Hine). Have killed the bird along the Souris, southwest of Plum Creek; in the museum of the Geological Survey at Ottawa is a specimen of the Avocet, marked from Manitoba (R. H. Hunter). (Professor Macoun tells me that the locality of this specimen is doubtful.—E. E. T.) Very abundant around saline ponds and lakes throughout the Northwest; shot at the base of the Coteau du Missouri, July 25, 1880 (Macoun). Qu'Appelle: Occasionally here; plentiful on the alkali ponds west (Guernsey).

68. Philohela minor. American Woodcock.

Very rare summer resident. Winnipeg: rare; only two pairs killed, and under a dozen birds seen altogether in 4 years (Hine). I saw one specimen of the woodcock at York Factory, in the end of August last. This bird is not uncommon in Manitoba, although the fact is not generally known (Bell, 1880). Oak Point: 1885, first seen May 13; rare; one was shot (Small). Rare summer resident; I shot ten birds in 5 years near Portage la Prairie; in 1886 I found a pair breeding near Winnipeg; arrive about the end of April, depart in September (Nash).

69. Gallinago delicata. Wilson's Snipe. Common Snipe.

Abundant summer resident of sloughs and swamps; abundant at Mouse River, on the boundary, in September (Coues). Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Summer resident; abundant (Hine). Red River Settlements, April 29 (Blakiston). Snipe found above Split Lake, and in many places along Nelson River; common in Manitoba (Bell). Ossowa: Common; breeding; 1885, first seen, three, on May 5; next seen May 8, when it became common (Wagner). Oak Point: 1885, first seen, one, on April 26; next seen, April 26; is common here (Small). Portage la Prairie: Common summer resident; abundant in spring and autumn migrations; I have, in August, frequently seen wisps containing from twenty to thirty birds; arrives in April; departs in October (Nash). Common all along the route of 1881; specimens shot at Swan Lake, Red Deer Lake, and Fort Pelly (Macoun). Carberry: Abundant; summer resident; breeding; Boggy Creek and various parts of the Big Plain; Rat Portage (Thompson). Two Rivers: 1885, first seen, April 6; somewhat rare; I believe it breeds here (Criddle). Dalton: 1889, first seen, one, on April 8; next seen, on April 12, when it became common; breeds here (Youmans). Shell River: 1885, first seen, one, on May 4; next seen, three, on May 8; a transient visitor, passing north; not remaining to breed (Celcutt). Qu'Appelle: Common summer resident; breeds; arrives April 20 (Guernsey).

Snipe are now (May 5, 1882) quite numerous; they frequent the damp rather than wet places. Their principal amusement on cloudy days seems to be dashing across the sky at a height of 200 or 300 feet and uttering a loud vibratory note, which is repeated, with lessening intervals, a dozen or more times; during the production of the sound the bird's wings seem to be rigidly set, but the tips appear to vibrate, and, at the same time, the course is obliquely downwards. As soon as the serenade is over the snipe wheels about, regains his elevation, and repeats the performance indefinitely. Having vented the feelings which prompted these actions, he descends to a much lower level by one or two long slanting gyrations, and then regains the earth by half closing his wings and dropping downwards into the grass.

The performance usually takes place in dull weather or in twilight. After it is over, I have often induced him to repeat it by marking him down and then springing him; he generally rises, uttering a sort of "screep," zigzags for a few yards, circles round the horizon in one or two sweeping gyrations, and either pitches down again to the grass or continues to ascend, and then repeats his song.

The next day one of the snipe's notes seems not unlike the "*tow, tow, tow*," of a stray turkey, but in a higher key.

About a week after arriving in its former haunts this well-known species begins to manifest its presence by uttering the remarkable pairing serenade for which several of the scolopacine birds are noted. When prompted to this peculiar performance the snipe—the male only, I suppose—rises suddenly from the bog where he has been feeding, and where his usual note is a "squeak! squeak!" and now, just after rising on his long, swift wings, this "squeak" is generally repeated a number of times. Immediately after taking wing he circles all around the marsh, then rises, silently, higher and higher, still circling, until, having reached an elevation of several hundred feet, he gathers his strength and goes whizzing across the sky, his tail spread to its utmost extent and wings vibrating with great rapidity, while a loud, sharp boom, repeated quickly twenty or thirty times, is heard as long as this career is continued. While thus engaged the course of the bird has been straight and slightly downward, and as soon as it is ended he remounts and dashes across again with the same resounding accompaniment. This he will keep up for half an hour at a time. Thus having expended his exuberant energy, he wheels lower and drops into the slough to receive the congratulations of the only spectator whose attention was specially courted.

This booming or whirring may be a product of the voice, or it may be caused by the wings, which appear to vibrate simultaneously with the production of the sounds, the quality of which is very nearly the same as that of the boom of the night hawk.

The favorite haunts of this bird are the open grassy sloughs or bogs which intersect the country. Here it finds in abundance the smaller insects which constitute its food, and here it makes its nest and rears its young. The position of the only nest of this species that I found was in a slightly-elevated tussock or sod in the middle of a wide muskeg. The nest consisted of a slight hollow, with a few straws for lining, and was raised only about 3 inches above the water. This was in the third week of July, and by the 27th of the month the four young ones were hatched and immediately left the nest, to lead a roving life with their mother among the grassy bottoms and the muskegs, rich with an infinitude of insect life.

70. Macrorhamphus scolopaceus. Long-billed Dowitcher, or Red-breasted Snipe.

Common, chiefly as a migrant in the western part of the province; Mouse River, at the boundary, possibly breeding; extremely numerous in September (Coues). Red River Valley: Summer resident; common west of Brandon; I have shot eighty in four discharges of a gun; are never seen in eastern Manitoba (Hunter). Winnipeg: Very rare; secured three or four near Reaburn; observed only in August and September (Hine). Very abundant at Swan Lake House and Red Deer Lake, July and August, 1881 (Macoun).

71. Micropalama himantopus. Stilt Sandpiper.

One specimen procured on the plain north of Qu'Appelle September 16, 1880 (Macoun). (This is just west of the province.) Have seen it in August and September on the Assiniboine, near Portage la Prairie, singly or in pairs; rare (Nash).

72. Tringa canutus. Knot. Robin Snipe.

Migrant. Winnipeg: Tolerably common in the migrations (Hine). I have never seen the Knot along Red River, but have seen large flocks of the species west of Brandon (R. H. Hunter).

73. Tringa maculata. Pectoral Sandpiper.

Migrant, chiefly in fall; common in fall migration along line at Turtle Mountain (Coues). Winnipeg: Rare; migrant (Hine). Portage la Prairie: Common in the autumn, frequenting the grassy marshes (Nash). Abundant along the route of 1881, also on the Great Plains and Northwest (Macoun). Moosejaw (west of Manitoba), July 7 (Miller Christy).

74. Tringa fuscicollis. White-rumped Sandpiper.

Migrant; not common. Portage la Prairie: Have occasionally taken it in autumn and more rarely in spring (Nash). Shoal Lake (south slope of Riding Mountain) and on Duck Mountain, June, 1884 (Thompson).

June 4, 1884, near Shoal Lake, saw a large flock, fifty or sixty; of White-rumped Sandpipers as they flew along the shores of a little pond; they performed so exactly the same evolutions in close column that the whole flock was entirely dark and silvery, according as they turned their backs or their breasts to me. Five specimens collected, two ♂ and three ♀; all showed sexual organs enlarged; all very fat; all had stomachs filled with aquatic insects; one had a very large larva.

75. Tringa bairdii. Baird's Sandpiper.

Fall migrant; not very common; in fall migration one of the most abundant sandpipers; along Mouse River and westward along the line of the Rockies (Coues). Have seen it in the autumn, near Portage

la Prairie (Nash). Saw a number on a salt marsh on Red Deer River, July 23, 1881 (Macoun). Carberry, August 21, 1884: Now common about the lakes in company with the two Yellow-legs, but not in flocks (Thompson).

76. Tringa minutilla. Least Sandpiper.

Somewhat common as a migrant; may breed. Turtle Mountain, July 30: Should not be surprised if it bred in the vicinity (Coues). Winnipeg: Tolerably common summer migrant (Hine). Shoal Lake, May 15, 16, 17, 1887 (Christy). Portage la Prairie: Very abundant, appearing in large flocks on the sand bars in the Assiniboine River and about the prairie sloughs in August (Nash). Shot on Red Deer River, July 23, 1880 (Macoun.)

77. Tringa alpina pacifica. Red-backed Sandpiper. Blackheart.

Migrant. Winnipeg: Transient visitor; tolerably common along the river (Hine). Portage la Prairie: Tolerably common during the fall migrations (Nash). Severn House (Murray).

78. Ereunetes pusillus. Semipalmated Sandpiper.

A migrant along Red River, Mouse River, and along the boundary at various points during August (Coues). Tolerably common along Red River in the migration, frequenting the wet prairies near Winnipeg (Hine). Portage la Prairie: Abundant in Assiniboine in the autumn; appearing early in August (Nash). Shot on the Red Deer River July 23, 1881 (Macoun).

79. Calidris arenaria. Sanderling.

Migrant; numerous about Lake Winnipeg, June (Kennicott). Shot five out of a flock at Oak Lake, a prairie slough, a few miles north of Portage la Prairie, August 1, 1884 (Nash). Abundant on the west shore of Lake Manitoba, June 12, 1881 (Macoun).

80. Limosa fedoa. Marbled Godwit.

Tolerably common summer resident. Pembina, June 30, 1873, nesting (Coues). Winnipeg: Summer resident, tolerably common (Hine). Red River Valley: Summer resident; common in Western Manitoba (Hunter). Plum Creek: Breeding, 1882, June 20 (Wood). Plains near Long River and South of Souris, May; tolerably common (Thompson). Qu'Appelle: Common summer resident; breeds; arrives May 10 (Guernsey). Hudson's Bay (Murray).

May 18, 1882, at Long River, north-east slope of Turtle Mountain, C. T. shot a fine ♀ Marbled Godwit from the wagon; feet, black; gizzard filled with shells and insects. They are somewhat common on

these wide, wet plains, but all those noted have been solitary individuals. Their large size, reddish color, and long straight bills distinguish them at a great distance.

81. Limosa hæmastica. Hudsonian Godwit.

Rare migrant. Winnipeg: Transient visitor; rare (Hine). Severn House (Murray).

82. Totanus melanoleucus. Greater Yellow-legs.

Abundant; migrant spring, late summer, and fall; very abundant in August and September at the boundary along Mouse river (Coues). Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Abundant in summer migration (Hine). Norway House (Bell). Portage la Prairie: Abundant in spring, arriving in April, usually in pairs; about the first of August they reappear in small flocks about the rivers and open prairie sloughs, where they feed on small frogs; depart late in October; the last flock I saw in 1884 were flying south in a snow storm on 21st of October (Nash). Very abundant at Red Deer river and on the Assiniboine; about all ponds in the fall of 1881 (Macoun). Carberry: Abundant; migrant in spring and in late summer (Thompson). Shell River: 1885, first seen, seven, on April 24, transient visitor; passing north, and not remaining any time or breeding (Calcutt). Qu'Appelle: Common migrant, May 5 (Guernsey). Severn House (Murray). Very common from the sea to Lake Winnipeg at the season (Blakiston).

August 21, 1884: Greater Yellow-legs are still very common about the weedy lakes. They come down from the north about the 1st of August, and are to be seen usually on the points of land that run out into the ponds; as they stand motionless on the promontories they look twice as large as they really are. They are more shy and less active than their minor brethren, for they usually stand in a dignified way until fired at or forced to fly, seldom running in the sprightly fashion of the Lesser Yellow-leg. They differ also in their food, for I have found the larger species with numerous small fish in their gullets, which is unusual for a Tattler. The members of this species raise their voice in a great outcry each time a gun is fired.

83. Totanus flavipes. Yellow-legs.

Common migrant all over; abundant throughout the Winnepegosis region; Nelson River; chiefly noted in Assiniboine Valley about August 15; common; spring, late summer, and autumn migrant; very abundant in August and September; along the boundary at Turtle Mountain and Mouse River (Coues). Winnipeg: Abundant (Hine). Portage la Prairie: This species arrives later than the last (Greater Yellow legs), not usually appearing before the 12th of May; they return about the first of August in flocks, and depart at the end of September, my latest record being October 1st, 1886, a single bird, near the Red River

(Nash). Carberry: Common migrant in August (Thompson); abundant about all pools in the fall, along the route of 1881 (Macoun). Shell river: 1885, first seen, three, on April 24; transient visitor, only passing north, and not remaining any time or breeding (Calcutt). Qu'Appelle: Common migrant; May 5 (Guernsey). Severn House (Murray).

84. Totanus solitarius. Solitary Sandpiper.

Chiefly in migrations; probably breeding; in abundance in autumn migration, Turtle Mountain, and Mouse River at the boundary (Coues). Winnipeg: Summer resident; abundant (Hine). Portage la Prairie: Tolerably common, and I think that some breed, though I have not found the nest; arrives about May 15; reappears about 1st August; departs in September (Nash). Frequent throughout the Winnepegosis region along the route of 1881; breeding, for young were observed July 20, feathered, but with some down yet (Macoun). Carberry and Portage la Prairie; in late summer migration (Thompson).

September 16, 1884, at Portage la Prairie, shot a solitary sandpiper.

On July 10, 1884, I shot a specimen of the solitary sandpiper (*Rhyacophilus solitarius*) at Maple Creek, 597 miles west of Winnipeg; it was doubtless breeding. In the dry bed of the creek I also caught a nestling bird, which was probably of this species. (Christy.)

85. Symphemia semipalmata. Willet.

Tolerably common summer resident in the south and west, at various points along the line from Red River to the Rockies (Coues). Souris Plain, near Turtle Mountain: Nesting, near Shoal Lake in June (Thompson). Common around saline ponds on the western plain and on the east side of Moose Mountain, July 29, 1880 (Macoun).

On May 23, 1883, on the Alkali Plain, north of Turtle Mountain land office, started a willet from her nest, which was placed in a slight hollow, shaded on one side by the skull of a buffalo and on the other by a tuft of grass. It contained four eggs, each of which measured 2⅛ by 1½ inches, ground color, dark olive brown, with heavy, round dark spots of brown and purple, evenly distributed, without any approach to a rind about the large end.

86. Bartramia longicauda. Bartramian Sandpiper. Prairie Plover. Quaily.

Abundant summer resident on the dry prairies; extremely abundant over the Red River prairies, along the boundary, Turtle Mountain, Mouse River; breeding (Coues). Winnipeg: Summer resident; common (Hine). Breeding at Selkirk Settlement (D. Gunn). Portage la Prairie: Abundant summer resident from early in May to about August 10 (Nash). Abundant in the prairies from Grand Valley and westward; not seen in the forest region (Macoun). Carberry: Abundant summer resident; breeding; in all the prairie regions to Brandon, and south to Turtle Mountain, also from Carberry northwestward to Fort Ellice

(Thompson). Two Rivers: 1885, first seen, one, on May 3; next seen, several, on May 4; became common May 5; breeds here (Criddle). Shell River: 1885, first seen, two, on May 4; afterwards seen every day; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 12 (Guernsey).

May 6, 1882: For some days back I have heard a loud rattling whistle that seems to come from the skies, and sometimes I have seen the bird that produces it sailing at a great height. Occasionally I have observed it sail downwards at an angle of 45 degrees and settle on the fence or on the prairie. To-day at noon I shot one of these birds as it was perched on a fence stake. It first alighted on the barn, where C. T. fired at it, but it flew off and alighted on the fence where I winged it. It did not attempt to escape, but lay on its back with its legs drawn up. I found it to be the upland plover, or quaily, as the residents call it. It was a male, length 11½, extension 20½; stomach contained insects and two rose-pip stones.

May 11: Single quailies very numerous now; they seem to sail downward out of the very sky, uttering their mournful whistle, like "*rrrrrr-phee-phee-oooo!*" as they sail down on the prairie, where they stand for a few seconds, like the statue of an angel, with their wings raised aloft, doubtless to show the beautifully barred under side, then deliberately folding them they nod and step forward and nod again at each step, and pick up the unfortunate early flies, and stop occasionally to reiterate the mournful whistle and thereby conjure out of the very clouds some comrade who also sweeps downward, whistles, alights, strikes the vainglorious attitude, then joins in the varied pursuits of love, music, and beetles.

May 4, 1883: Quailies noted. A. S. T. May 11, quailies very numerous now.

On June 6, 1883, while crossing the prairie near the house, I flushed a Quaily from her nest almost under my feet; she fluttered a few yards forward and then lay flat on the prairie, beating her wings on the ground and uttering such heart-broken cries that I could not but leave her in peace. The nest contained three eggs.

June 15. I saw a curious sight on some newly broken prairie. A Quaily had sprung from her nest just under the feet of the plough-horses; the man had stopped them, removed the four eggs the nest contained, ploughed on, and then, after replacing the square foot of sod the bird had nested in, restored the eggs to their place and left them. Very soon the mother bird found courage to return and resume her duties, and when I saw her, she was sitting contentedly on her eggs in this tiny green patch surrounded by acres of level black earth.

June 4, 1884. In this day's drive saw no pairs of Quailies, but observed seven solitary birds. During the last week of May the species was always seen in pairs, and it was this that led me to count. The change noted to-day is, no doubt, due to the fact that the honey-moon

is over and the laying season commenced. The egg of this species is actually larger than that of a prairie chicken, although the quaily weighs but 4 ounces, and the chicken nearly ten times as much.

During the summer no bird is more familiar on the Manitoban prairies than the Upland Plover or Bartram's Sandpiper (*Bartramia longicauda*), commonly there known as the "Quaily," from its note. Surely no bird ever differed more completely from the generality of its relatives than this! It is a Sandpiper which does not appear to frequent marshes, which breeds habitually on the dry open prairies, and which is frequently to be seen perched among the branches of trees. Its tameness is excessive. Often when driving over the prairie I have seen it remain within 3 yards of the passing vehicle without the slightest concern. When on the wing, it offers a shot so temptingly easy that few can resist. Its note is a highly remarkable one, not easily forgotten when once heard. Dr. Coues well describes it as a "long-drawn, soft, mellow whistle, of a peculiarly clear, resonant quality." It breeds abundantly on the open prairie, and I have several times caught the young in down. The majority left Manitoba towards the latter end of August, but I was several times surprised at hearing or seeing a belated pair until quite late in September. (Christy.)

This species is an abundant summer resident on all the dry prairies near Portage la Prairie, arriving early in May; at this time they are very tame, and may frequently be seen perching on the fences, and I once saw one make a ludicrous attempt to settle himself on the glass insulator on top of a telegraph pole. About the 1st of August they desert this prairie and betake themselves to the broken land in small flocks. They are then very wild. By the 10th of the month they have all left; though on August 29, 1884, I saw a single bird flying over. Not observed in the vicinity of Winnipeg (Nash in MSS.).

87. Tryngites subruficollis. Buff-breasted Sandpiper.

Winnipeg: Transient visitor; rare; in migration along Red River (Hine).

88. Actitis macularia. Spotted Sandpiper.

Common summer resident along streams; throughout the region from Pembina to Rockies along the boundary (Coues). Winnipeg: Summer resident; abundant; breeding (Hine). Norway House (Bell, 1880). Shoal Lake, May 15, 1887 (Christy). Oak Point: 1884, arrived April 22 (Small). Portage la Prairie: Abundant summer resident, arriving soon after May 1; departs at the end of September; the last seen by me was on the 24th of that month (Nash). Common; breeding along the route of 1880 and 1881; always seen in couples (Macoun). Portage la Prairie: July 22, 1884, saw young Peetweets running with the old ones along the banks of Owl Creek (Thompson).

89. Numenius longirostris. Long-billed Curlew.

Summer resident of the wet prairies; breeds in moderate numbers about Pembina (Coues). Winnipeg: Rare; transient; visitor (Hine). Rare spring and autumn visitor; saw five on Rat Creek, in the Westbourne marsh, October 8, 1884 (Nash). Frequent on the Souris plain, May, 1882, frequenting the wet prairie (Thompson).

90. Charadrius squatarola. Black-bellied Plover.

Spring migrant. Winnipeg: Fairly plentiful, frequenting fields or flying in large compact flocks with other waders; goes north to breed, but is back in numbers during the summer (Hine). Carberry: Spring migrant; saw flocks on the fields May 24, 1884, and on June 3, on Rapid City Trail; south slope of Riding Mountain, saw three; also a Gray Plover (Thompson). Dalton: 1889, first seen, about a hundred, on May 27; are common for a few days in spring (Youmans). Severn House (Murray).

91. Charadrius dominicus. American Golden Plover.

Common spring and fall migrant; very abundant along the Mouse River at the boundary, in late September (Coues). Winnipeg: Abundant; transient; visitant; arrives about the middle of May; goes north to breed; comes back in large flocks in August; affects burnt prairie and ploughed land (Hine). Portage la Prairie: Abundant spring and autumn visitor, occurring in large flocks; they frequent the prairie sloughs, the broken land, and are particularly partial to the burnt prairie; I have seen them in vast numbers following the fires; they will alight on the ground burnt over a few hours after the fire has passed; arrive in May, reappearing in August, and departing in October (Nash). One flock seen at Fort Pelly, September 18, 1881 (Macoun). Carberry: Common spring migrant; Long River; plain south of the Souris; north side of Turtle Mountain (Thompson). Shell River: 1885, fifty or more in flocks going north on May 26; transient; visitant only; not breeding (Calcutt). Qu'Appelle: Tolerably common migrant; May 20 (Guernsey). Trout Lake Station and Severn House (Murray).

92. Ægialitis vocifera. Killdeer.

Common summer resident; abundant throughout the summer in all suitable places, Pembina to the Rockies, along the line (Coues). Dufferin: Arrived between 15th and 20th of April, 1874 (Dawson). Winnipeg: Summer resident; plentiful; breeding (Hine). Oak Point: 1885, first seen, one, on April 17; next seen, one, on April 18; is common, and breeds (Small). Portage la Prairie: Abundant summer resident, arriving in April, departing at end of September (Nash). Abundant everywhere along the route, on Western plains, and especially on Winnepegosis, around the salt licks; shot at Manitoba House, June 16, 1881 (Macoun). Carberry: Latterly a summer resident, breeding about ponds, preferably with gravelly or sandy shores; near Brandon; near Long River; Silver Creek; near Rapid City (Thompson). Dalton: 1889, first seen, five, on April 8; next seen on April 12, when it became common; breeds here (Youmans). Brandon: Breeds; eggs taken second week in July, 1882 (Wood). Shell River: 1855, first seen, one, male, on April 6; is a common summer resident, and breeds here (Calcutt).

Qu'Appelle: Common summer resident; breeds; arrives April 17 (Guernsey).

July 7, 1882, at Silver Creek, saw a single downling Killdeer running on the trail just before the oxen; both its parents were flying about, uttering their loud laments and trying to decoy the young one aside, but could not get it out of the wagon rut into which it had fallen; it ran on straight, trying to keep ahead of the oxen, till I caught it. It was the most fawn-like thing I ever saw in feathers; its large lustrous eyes were turned on me with an expression of fearless innocence that was touching, and when I set the little ball of down at liberty on the prairie it walked gracefully away without betraying any consciousness of having been in the power of its worst enemy. It was apparently newly hatched, but the markings of its downy coat were similar to those of the adult birds, minus the orange.

93. Ægialitis semipalmata. Semipalmated Plover. Ring Plover.

Rare migrant between Hudson Bay and Lake Winnipeg (Murray). Winnipeg. Summer resident; rare (Hine). Common at Lake Winnipeg in June (Kinnicott). Portage la Prairie: Very abundant in August, frequenting the sand-bars on the Assiniboine with the Least Sandpiper (Nash). Abundant with Killdeer, and evidently breeding, as I saw young with them at the salt springs on Red Deer River, July 22, 1881; at Lake Manitoba (Macoun). Brandon: One seen April 28, 1882, another May 25 (Wood). Trout Lake Station and Severn House; plentiful in Arctic America (Murray).

94. Ægialitis meloda. Piping Plover. Ring-neck.

Migrant; possibly breeds also. Winnipeg: Summer resident; tolerably common (Hine). Procured four specimens at Lake Winnipeg (D. Gunn). Portage la Prairie: Occurs in the migrations with the Semipalmated Plover (Nash). Shot migrating in company with Sanderlings on the shores of Lake Manitoba, June 12, 1881 (Macoun).

95. Arenaria interpres. Turnstone.

Migrant. Winnipeg: Rare, but occurs about the prairie ponds here, and on shore of Lake Winnipeg in pairs; apparently goes north to the large lakes to breed; returns about the middle of August (Hine). Lake Winnipeg (Brewer). Severn House (Murray).

96. Dendragapus canadensis. Spruce Partridge.

Resident in the spruce forests of the north and east; common. Winnipeg: Summer resident; abundant in spruce woods, but so tame and fearless that its pursuit can scarcely be called sport (Hine). A specimen in Smithsonian Institution from Red River Settlement (Blakiston). Does not occur in the immediate vicinity of Portage la Prairie or Winnipeg,

but I have seen numbers of them brought in to the game dealers from the woods about Lake Winnipeg, where it is resident (Nash). Swampy Island: 1885, first seen, flock of ten, on March 9; next seen March 11; always common and resident; very abundant October, November, and April; breeds here (Plunkett). Very numerous in the poplar woods to the north of Fort Pelly along Red Deer River, and at the sources of the Swan River, August, 1881 (Macoun). Rat Portage: One specimen taken by me October, 1886; I was informed that it is not uncommon here, though much less plentiful than the Birch Partridge or Bonasa (Thompson). Trout Lake (Murray). In great plenty near Cumberland House (Hearne, 1771).

October 16, 1886, Rat Portage: Shot a female Spruce Partridge to-day; length, 14½; wing, 7; tail, 4¼; crop and gizzard filled with spruce leaves. This is the only specimen seen here, but at Port Arthur, October 8, I saw numbers exposed for sale in the shops; they were said to have been shot in the neighborhood.

97. Bonasa umbellus togata. Canadian Ruffed Grouse. Birch Partridge.

Tolerably common in the spruce woods of the east; specimens sent to Mr. Ridgway from the "Norwest Angle" near Rat Portage have by him been pronounced this variety; it is fairly plentiful there and known as the Birch Partridge; it is probable that all of this species found within the limits of the coniferous forest as indicated may be referred to the form of *togata;* therefore I assume that the following records belong here: "Puskee, Shoulder-knot Grouse;" this bird is an inhabitant of the southern parts of Hudson's Bay; feeds on birch buds (Hutchins, MSS. observations, Hudson Bay, 1782). Swan Lake (probably) (Macoun).

Referring to the Ruffed Grouse, the Sharptail, and the Wood or Spruce Partridge, Hearn says: "I have seen them in great plenty near Cumberland House;" and later, in writing of the drumming of the first: "I have frequently heard them make that noise near Cumberland House in the month of May, but it was always before sunrise and a little after sunset."

On October 11, 1886: At Rat Portage some Indians came to the door to-day with a lot of partridges to sell. These no doubt would have proved *togatus*, as they must have been taken in the neighborhood; several among them had red ruffs, showing that that variation is not confined to the subspecies *umbelloides.*

At Rat Portage, January 14, 1887, I received five partridges (var. *togatus*), shot in the woods just west of this point; four were males and measured 17½, 19⅛, 19, 18¼ in length; one doubtful was 19¾ long.

Carberry specimens of *umbellus* had been referred to the form *umbelloides* by Mr. Ridgway, and when he further decided my Rat Portage specimens to be *togatus*, there were not lacking those who ridiculed the idea of the two forms being typically represented within 200 miles

of each other; but a further consideration of the physical features of the country has shown the reasonableness of such occurrence, for the *togatus* birds were taken within the great coniferous forest which is its assigned locality, while the *umbelloides* examples were taken from the open aspen woods near the northeastern boundary of the dry region that is inhabited by the pale form of *umbellus*.

97a. Bonasa umbellus umbelloides. Partridge, or Gray Ruffed Grouse.

Common resident of the poplar woods in the west and south of the province. Specimens sent from Carberry to Mr. Ridgway prove to be of the variety *umbelloides;* therefore I assume that all those taken in the open and poplar woods are of this form.

Winnipeg: Permanent resident; common (Hine). Ossowa: Resident; breeding (Wagner). Specimen from Red River Settlement in Smithsonian Institution (Blakiston). Portage la Prairie: Abundant; resident in the woods, and frequently found in the bluffs on the prairie if they are of any extent (Nash). Heard drumming about Manitoba House, 1881; abundant in woods along Red Deer and Swan Rivers, 1881; Fort Ellice; Touchwood Hills and northern woods generally (Macoun). Carberry: Common, and resident in all woods; noted at south slope of Riding Mountain, Fort Ellice, west slope of Duck Mountain, and Portage la Prairie (Thompson). Qu'Appelle: Common; permanent resident; breeds (Guernsey).

On April 4, 1882, the snow was 3 to 4 feet deep everywhere. Went to the slough with W. Brodie. We saw several Ruffed Grouse and we each shot one.

Bonasa umbellus umbelloides, male; length 17½, extension 21 inches. The pectinations or points of its snowshoe but about half a dozen on the outside of each outer toe; the middle claw of each foot rubbed down to a mere stump, the others normal; fine, full, black ruff. The bill presented an unusual feature, for when the mandibles were closed there still remained a wide opening right through the beak, near the tip, just behind the hook; this had the appearance of having been *worn* away, as no doubt it was in process of collecting the browse on which the species feed throughout the winter. Its crop was filled with various kinds of buds.

Second specimen, female; length 16½, extension 22. Snowshoes or pectinations on the feet perfect; ruff insignificant; bill normal; crop full of browse.

April 10, the snow still deep in the woods, shot a Ruffed Grouse, male; length 17, extension 22. Tarsi feathered to the toes; claws blunt; pectinations of toes perfect; tail all gray without any brown at all, as also was the general plumage; ruffs very full; beak with the same remarkable subterminal opening as that already noted on April 4.

In the spruce bush on December 5, after sundown, as I walked near the camp, I noticed the marks in the snow where two Ruffed

Grouse had alighted, and then without running more than a few steps had dived into the drift. As I came nearer the birds sprang up through the powdery snow a few feet in advance of their entering places and I secured one of them. It was of the typical *umbelloides* form, with gray tail and plumage; its crop was filled with catkins (hazel?), equisetum tops, rose-hips, and various kinds of browse; probably birch preponderated.

It seems to be the normal habit of this bird to roost in a snow drift during the coldest weather. The wonderful non-conductivity of the snow is well known, but may be forcibly illustrated by the fact that although the thermometer registers 35° below zero, the 10 inches of snow which fell before the severe frost came, has effectually kept the wet earth in the woods from freezing, although the temperature has been at or below zero for over a week. In view of these facts it is easy to understand that the grouse in the snow drift are quite comfortable during the coldest nights. In general the bird will be found to run about before burrowing into the drift; each makes its own bed, usually 10 or 20 feet from its neighbor; they usually go down a foot or so and along 2 feet; they pass the whole night in one bed if undisturbed, as the large amount of dung left behind would indicate. They do not come out at the ingress, but burst through the roof of their cot at one side; they do not usually go straight ahead and out, because their breath during the whole night has been freezing into an icy wall just before their nostrils.

On December 7, in the spruce bush, shot two Ruffled Grouse this afternoon, about sunset. They were running about on a snowdrift, picking the buds off the projecting twigs of a shrub that I take to be the dwarf birch. One of them was in splendid bronze plumage, *i. e*, with the ruffs and tail band of a rich copper color, and the other dark marking, glossed with the same. To-day the thermometer stood at 20° below zero.

On May 24, 1883, saw a partridge on his drum-log in the eastern woods. The log looked as though it had been used for several seasons, as it was much worn and a great quantity of dung was lying on each side of it.

On August 21, while crossing a part of the spruce bush, I heard the warning chuckle of a partridge to her brood. I pressed quickly forward and distinctly saw her sitting on a stump, 30 yards away. Fresh meat was desirable, and the young were well grown; so, hastily raising the gun, I fired, without the slightest effect on the gray still form on the stump, but at the shot the young ones rose with a whirr and scattered to the left. Then again I fired in haste at the form on the stump, this time with ball, and the only effect was to satisfy myself that I had been blazing away at an old knot. As I reloaded I walked towards this deceptive piece of wood, and it continued as rigid as any other stump until I was within 15 yards, when up it sprang and flew off in the woods in the opposite direction to that taken by the flock.

October 25: Birtle. During the last few days, while traveling on both banks of the Assiniboine, I have seen every shade of brown and gray partridges together in the same regions.

November 12: Ground covered with snow; hard frost; in spruce bush with J. Duff on a deer hunt; saw three partridges roosting in an open poplar, about dusk; shot two of them. I can not understand these birds so roosting, for, in addition to the inclemency of the weather, horned owls are very numerous and very fond of partridge flesh. It is usual for this species to roost in spruce coverts or else in a snow drift, hence it may be concluded that these two birds simply made a mistake and paid dearly for it.

On May 3, 1884, in spruce bush, I collected three male partridges; one of the gray cast of plumage, with copper ruff; one brown, and one intermediate. All had their crops filled with poplar catkins.

On Thursday evening of May 29 I heard a partridge drumming in a low thicket by the slough. I continued to approach it by cautiously crawling while the bird was drumming and lying still while he refrained. When at length I was within 20 feet and yet undiscovered, I ensconsed myself behind a thicket and settled myself to watch. The drummer was standing on the log with his head and crest erect, his tail spread but the feathers on his body compressed. After looking about unconcernedly for a moment, he seemed to crouch a little to brace himself, then the wings flashed with a *thrump*, followed by a stillness, and from the appearance of the bird one might think the performance ended, but after about six seconds there is another hazy flash of the wings, accompanied again by the *thrump;* in about two seconds it is repeated, and again in half a second, and again and again, faster and faster, until at last the strokes run into each other and roll away like "the rumbling of distant thunder." I watched the performance a number of times. Between each "tattoo" he did not strut but remained in the same place, merely turning his head about. Also satisfied myself that the wings beat nothing but the air. I had previously accepted this as the correct theory, because whether it stand on a sound or rotten log, a stump or a stone, the sound is always the same, and therefore it could not drum on the perch, nor could it make the sound by beating its wings together, for when a rooster or a pigeon strikes its wings together the sound is a sharp crack, so that there is no plausible explanation other than the one above given.

On June 19, on the west side of Duck Mountain, in a thick poplar woods, we came on a partridge that evidently had a nest or a brood close at hand. She ran about our feet with her ruffs and tail spread and her wings drooping, and whined in a manner that showed the reason of her anxiety, but we failed to find the young or eggs.

While exploring in the Carberry spruce bush, on July 3, with my friend, Mr. Miller Christy, we passed a tree at whose roots was a part-

ridge's nest, but would not have discovered it had not the mother pursued us some 20 feet that she might begin a vigorous attack on our legs, whereupon we turned and found the nest. It was just at that critical moment when the young were coming out. Those that were hatched, some six or eight, hid so effectually within a space of 6 feet that no sign of them could be seen after the first rush, and once hidden, they ceased their plaintive peeping and maintained a dead silence. Meanwhile the mother was sorely distressed, running about our feet with drooping wings, whining grievously in such entire forgetfulness of herself and in such an agony of anxiety for her young that the hardest hearted must have pitied her and have felt constrained to leave her in peace, as we did.

This nest contained one addled egg and one with a chick dead and dried in. The egg was $1\frac{5}{8}$ by $1\frac{1}{4}$, brown, with a few dots of umber.

Every fieldman must be acquainted with the simulation of lameness by which many birds decoy, or try to decoy, intruders from their nests. This is an invariable device of the partridge's, and I have no doubt that it is quite successful with the natural foes of the bird; indeed, it is often successful with man. More than once I have stood still when a clucking bird flew up, and laughed heartily to see some tyro rushing frantically after the limping mother, shouting "Come on! she's wounded!" A dog, as I have often seen, is certain to be misled and duped, and there is little doubt that a mink, raccoon, skunk, fox, coyote or wolf would fare no better. Imagine the effect of a bird's tactics on a prowling fox. He has scented her as she sits; he is almost upon her; but she has been watching him, and suddenly with a loud "*whirr*" (the whirr is essential, I think) she springs up and tumbles a few yards before him. The suddenness and noise with which the bird appears causes the fox to be totally carried away; he forgets all his former experiences; he never thinks of the eggs; his mind is filled with the thought of the wounded bird almost within his reach; a few more bounds and his meal will be secured. So he springs and springs, and very nearly but not quite catches her; in his excitement he is led on and away, till finally the bird flies off, leaving him a quarter of a mile or more from the nest.

If, instead of eggs, the partridge has chicks, she does not await the coming of the enemy, but runs to meet and mislead him ere yet he is in the neighborhood of the brood; she then leads him far away, and returning gathers her young together again by her voice.

When surprised she utters a well-known danger signal, whereupon the young ones hide under logs and among grass. Many persons say they will each seize a leaf in their beaks and then turn on their backs. I have never found any support for this idea, although I have often seen one of the little creatures crawl under a dead leaf.

By the end of September the young partridges are fully grown and very fat. At this time they commonly spend the night either squat-

ting under the evergreens or roosting in the trees; but when the weather gets cold and the snow lies deep and soft in the woods, they begin to sleep in the drifts, going down nearly a foot in the same manner as that described under the Prairie Chicken.

Their food at this time is chiefly browse, birch-catkins, and rose-hips, but in the summer and fall they live largely on insects, leaves, berries, and nuts. In September I shot some with their crops full of acorns.

The flesh of the partridge is ranked by many as the most delicate of all our game, while the bird affords the best of sport to those who hunt it fairly. But it is hard to understand the feeling of those who will beat a fine partridge bush with a cur that is trained to tree the bird and hold its attention by barking, while his comrade, guided by the uproar stealthily approaches within a few feet and after a long and deadly aim discharges half a pint of buckshot into the hapless bird, which, between the shot and the cur, is so mangled before the musketeer secures it that after all he gets but little more than he deserves.

It goes without saying that an object in motion catches the eye more quickly than one at rest, and it is evident also that so small an object in a landscape as a rabbit or partridge will almost certainly escape observation if it be completely at rest. This fact is so well known to most wild animals, especially those that are continually harassed by the predaceous kinds, that the moment they perceive the approach of an enemy they become motionless as statues, and, no matter what their attitude, move neither eye nor limb till they have thoroughly taken in the situation and satisfied themselves that there is nothing further to be gained by concealment. This habit I have often noticed in the partridge and have observed it maintain its fixity for a remarkable length of time under very trying circumstances.

A second purpose served by motionlessness is that of enabling the animal to observe accurately the motions of its enemy. An observer in motion can not accurately gauge the slight movements of another, and the only resource is to pause often so that the relative movements of the object watched may be gauged against the background. This end I conceive is exactly met by the nodding head of the walking partridge; its body continues in steady progression, but its eye or base of observation is for a moment in each step at a standstill, thereby giving it a great advantage.

On the 14th October, 1884, whilst Prairie Chicken shooting, we found and shot a large full plumaged male partridge on the open prairie, at least a mile from cover of any kind. This species exhibits great variation in plumage, hardly any two being alike. I have found the extreme phases as follows: Rufous plumage with black ruffs; gray plumage with black ruffs; both above colorations of plumage with copper ruffs and black tail bars.

Both colorations of plumage, with copper ruffs and copper tail bars; the great majority of birds, however, are intermediate between these phases. Between October 15 and December 9, 1886, near Winnipeg, I took one hundred and eighteen of these birds, amongst them thirty-one adults in full plumage. The following

memorandum, made at the time, shows the relative proportions of the above-mentioned phases:

A. Black ruff with rufus plumage	10
B. Copper ruff, rufus plumage, with copper tail band	2
C. Black ruff with gray plumage	8
D. Dark intermediate ruff, gray plumage	1
Intermediates:	
Between A and C	4
Between B and D	2
Between A and D	3
Between A and B	1

The remainder of those taken exhibit every possible variation between these forms. (Nash, in MSS.)

98. Lagopus lagopus. Willow Ptarmigan, or White Partridge.

Abundant winter visitant to the wooded regions of the Northeast. Winnipeg: Winter visitor; rare; abundant at upper end of Lake Winnipeg (Hine). Swamp Island: 1885, first seen, a flock of about twenty on February 16; next seen on February 21; is common in severe winters only; is usually rare; does not breed here; 1886, first seen, about ten, on January 12; the bulk arrived March 8; last seen, March 21; was abundant this year (Plunkett). Northern part of Red River Valley: Transient visitor in winter and very rarely (Hunter). Near Lake Winnipeg, at Fort Cumberland and to the eastward, they are common every winter (Brewer). Very seldom to be seen south or west of Lake Winnipeg, but is found in all the country north and east of that lake during the winter season (D. Gunn). Portage la Prairie, 1884: Saw three brought from Lake Winnepegosis last winter (1883); it is said to be a regular winter visitant to Lake Manitoba, generally in January and February (Nash). In the year 1819 its earliest appearance at Cumberland House was in the second week of November (Richardson). Common every winter near Fort Cumberland (Blakiston). Norway House (Bell).

These birds are very numerous at the northern settlements, likewise on the eastern coasts of the bay. I have known upwards of ten thousand caught with nets at Severn from the month of November till the end of April. (Hutchins MSS., Observations on Hudson Bay, 1782.)

99. Tympanuchus americanus. Prairie Hen, or Pinnated Grouse.

Abundant resident in the cultivated sections. In 1872 Dr. Coues wrote: "I have no reason to believe that it occurs at all in northwestern Minnesota or northern Dakota. * * * I have met with no indication of its occurrence north of the United States boundary." In 1882, when first I visited Manitoba, the species was nearly unknown in the country, the only known specimens having been taken near Winnipeg in 1881. In 1883, Mr. Hine informs me, it began to be common at Pembina. In 1884 it was not only common at Winnipeg, but had also

made its appearance at Portage la Prairie, on the Assiniboine, where, according to Mr. Nash, it is now (1890):

Resident; increasing in number every year. The first I heard of was killed in the fall of 1882, about 8 miles north of Portage la Prairie. In 1883 I heard of them in one or two places. In 1884 I killed several and heard of them from most of my friends who shoot. Those I saw were all young birds except one. This was in full plumage. In April, 1885, I put up several single birds on a piece of breaking, and afterwards heard in various directions their peculiar booming. Since that they have become tolerably common.

Red River Valley, 1885: It is now a permanent resident here, but only during the past few years; they are gradually working their way north from Minnesota, and have appeared at Westbourne (Hunter). Carberry: In December, 1886, I found it had made an appearance there, having been observed; also at Melbourne; in 1890, Mr. Hine writes me that it was now an abundant summer resident (Thompson).

On December 1, 1886, was shown a Prairie Hen (*Tympanuchus americanus*) shot near by, and was told that young Ed. Thompson shot another here last fall. Previously the bird was unknown in the neighborhood. December 20, at Melbourne, 7 miles east of Carberry, saw two Prairie Hens. The species is evidently working towards the north and west, no doubt following the plow.

The first information I received of the appearance of the Pinnated Grouse in this province was from a farmer, living about 8 miles north of this town (Portage la Prairie), who had shot one in the fall of 1882. I did not see the bird, but from the description he gave me of it I could not mistake it. I immediately made inquiries among the hunters of this locality, but no one else had seen it. In the fall of 1883 I again heard of the bird in one or two places, but saw none myself. In the fall of 1884 it became plentiful, comparatively speaking, in this neighborhood, and to the eastward, that is to say between here and Winnipeg, I had the good fortune to secure two specimens in rather a lucky fashion. I was out with a friend chicken-shooting, October 6, 1884, at Burnside, a settlement 10 miles west of this town, when we saw a large flock of grouse alight in a stubble field near us. When we reached the field three birds got up, of which I killed two with the first barrel, and the other with the second barrel. Of the two first killed, one was a Pinnated Grouse, the other a Sharp-tailed Grouse; the one killed with the second barrel was a Pinnated Grouse. I got no others, but heard of them from nearly all of my acquaintances who hunt. Strange to say, all that were obtained, except one, appear to have been young birds, and this one was in full plumage, having on each side of the neck the long pointed feathers peculiar to the species. So far as I can learn with any degree of certainty, these birds are not yet (March, 1885) found much west of the place where I killed mine, nor farther north than 10 or 12 miles from Portage la Prairie. They are evidently working in here from Minnesota and Dakota, and are following the grain. Up to this time the Sharp-tailed Grouse has been very abundant, but, as might be expected, it is getting scarcer in the vicinity of the towns. So far, both birds here associate together when they pack and find food in the stubbles. (Nash, in Professor Cook's report on migration, 1885).

In 1886, near Winnipeg, I found them abundant, about one-third of the Prairie Grouse seen being of this species. They do not visit the deep woods as do the Sharp-tailed Grouse, but in the winter frequent the willow shrub for shelter. Nor do they so often alight on trees as the other species. The serrations attached to their toes are much smaller than those of either the Ruffed or Sharp-tailed Grouse, which may perhaps be the reason.

When feeding on the stubbles both species of Prairie Grouse associate together in the packs, but separate when the Sharp-tails go into the woods. (Nash, in MSS).

100. Pediocætes phasianellus. Northern Sharp-tail Grouse.

Resident in the Northeast. Some of these birds were shot near Dogshead Lake, Winnipeg; thence I have found them eastward, as far as Long Lake and Pie River, on Lake Superior (Bell, 1880). Mr. Ridgway informs me that the Smithsonian Institution has a specimen of true *phasianellus* from Lake Winnipeg; at Rat Portage also I saw several specimens shot in the vicinity (Thompson). Trout Lake Station (Murray). In great plenty near Cumberland House (Hearne, 1771).

I have seen them in great plenty near Cumberland House * * * frequently perch on the tops of the highest poplars, out of moderate gunshot, and will not suffer a near approach. They sometimes, when disturbed in this situation, dive into the snow; but the sportsman is equally balked in his expectations, as they force their way so fast under it as to raise for flight many yards distant from the place they entered, and very frequently in a different direction to that from which the sportsman expects. This I assert from my own experience when at Cumberland House. (Hearne.)

Aukuskou. Pheasant grous * * * . These birds keep in pairs or sn all flocks and frequent the Juniper plains all the year. The buds of these trees are their principal food in winter, as their berries are in summer. They generally inhabit about the same spot, unless disturbed; their flights are short. They frequently walk on the ground, and when raised will fly on the top of an adjacent tree. In June they make a nest on the ground with grass and line it with their own feathers. They lay from four to seven white eggs, with colored spots, and bring forth their young about the middle of June. (Hutchins MSS., Observations on Hudson Bay, 1782.)

Rat Portage, October 11, 1886. Some Indians came to the door to-day with Prairie Chickens to sell. So far as I could judge these did not differ from specimens seen at Port Arthur, and were probably referable to the typical form. (E. E. T.)

100a. Pediocætes phasianellus campestris. Prairie Chicken.

Abundant and resident throughout the South and West (the Carberry form is, according to Mr. Ridgway, nearer to *campestris* than to *phasianellus*); abundant resident; abounds from Pembina to the Rockies, along the line (Coues). Winnipeg: Stinking River and Long Lake; summer resident; abundant (Hine). Red River Settlement (Blakiston). Several times observed from the trains between Winnipeg and Rat Portage (Thompson). Ossowo: Resident; breeding (Wagner). Portage la Prairie: Abundant; resident (Nash). Very abundant on the prairies from Livingstone southward in 1881, but not noted at all in the Winnepegosis region (Macoun). Carberry: Abundant; resident; partly migratory, as it lives on the prairies in summer and in the woods in winter; noted at Sewell, Chater, Brandon, north slope of Turtle Mountain as far as Pelican Lake, throughout the country from Carberry to Fort Ellice, and northwards in prairie localities to Cote's Reserve (Thompson). Qu'Appelle: Common; permanent resident; breeds (Guernsey).

April 18, 1882. Saw a flock of about thirty Prairie Chickens. Shot

one and identified it as the *Pediocætes phasianellus*. It was a female. Length 17, extension 25½ inches. The pectinations on the toes very imperfect. Some of its comrades flew off and perched on tops of the highest trees. While the one I had shot was struggling in the agonies of death, its tail was rapidly vibrated, so that the hard stiff feathers of which it is composed produced a loud rustling noise, somewhat like the sound of a newspaper shaken violently.

April 19. Large numbers of Prairie Chickens about. They are said to be returning from the woods.

April 21. Numbers of Prairie Chickens about. One was on the roof of the shanty making a curious crowing noise.

April 28. Went to spruce brush with A. S. T. On the road he showed me a Prairie Chicken. I dropped it at 40 yards with a half charge of No. 12. My brother remarked that they were never alone at this season; there must be another near by; and presently I saw its head in the grass and added it to our bag. Both were males.

No. 1. Length 18, extension 26 inches; bare skin over the eye, bright chrome-yellow; air sacs purplish; all pectinations gone from the toes but about 6 points; claws very blunt.

No. 2. Length 18, extension 27 inches; exactly as above, but pectinations of the toes complete yet and claws quite sharp.

May 8. Prairie Chickens abundant now on the prairies.

May 9. Three Prairie Chickens brought to me to-day by the boys; two males; one female; crops of all were filled with willow catkins, sand-flowers (*Anemone patens*), and rose-hips. The female was without the air-sacs on the neck or the yellow over the eye. One had no pectinations on the toes, the other two had the imperfect remains of them only.

May 10. Prairie Chicken (male) shot to-day shows no pectinations whatever on the toes.

May 12. Brandon, C. T. shot a Prairie Chicken (female). In the oviduct was an egg nearly ready to be dropped; it was of a very pale blue; about the color of a blue-bird egg.

May 15. Camp 30 miles south of Souris. Shot a Prairie Chicken; (female); toes quite clear of pectinations; gizzard and crop filled with rose-hips and the fleshy flower receptacles of the sand-flower (*Anemone patens*).

May 16. Camp 10 miles east of land office, Turtle Mountain. Shot a Prairie Chicken (female); no pectinations on toes; crop full of willow catkins and sand-flowers; one egg ready to be laid; it is pale bluish olive in color.

Sept. 23. Prairie Chickens were numerous to-day in a little grove just west of the house. Specimens shot showed the feathering of the legs and the pectinations of the toes in full development.

In Manitoba this bird is always spoken of as the Prairie Chicken. I have several times heard this name objected to by Eastern naturalists

as being preoccupied by the *Tympanuchus americanus*, but I would submit that the latter is always known as the *Prairie Hen;** and though but a fine distinction it is a distinction, and it is better that it should remain, rather than attempt the alteration of nomenclature that has become as much a part of the language as the conjugation of the verb "to be."

This eminently prairie bird in the summer time usually retires to the woods and sand hills on the approach of winter; but in the spring, before the snow is gone, they again perform a partial migration and scatter over the prairies, where alone they are to be found during the summer. They are very shy at all times, but during the winter the comparatively heedless individuals have been so thoroughly weeded out by their numerous enemies that it requires no slight amount of stalking to get within range of a flock in the springtime.

The advent of the grouse on the still snow-covered plains might prove premature, but that they find a good friend in the wild prairie rose (*Rosa blanda*). It is abundant everywhere, and the ruddy hips, unlike most fruits, do not fall when ripe, but continue to hang on the stiff stems until they are dislodged by the coming of the next season's crop. On the Big Plain stones of any kind are unknown, and in nearly all parts of Manitoba gravel is unattainable during the winter; so that the "chicken" and other birds that require these aids to digestion would be at a loss were it not that the friendly rose also supplies this need; for the hips, besides being sweet and nutritious, contain a number of small, angular, hard seeds, which answer perfectly the purpose of the gravel. To illustrate the importance of this shrub, in this regard, I append a table of observations on the crops and gizzards contents of grouse killed during the various months as indicated:

January.—Rose-hips, browse, and equisetum tops.
February.—Rose-hips and browse.
March.—Rose-hips and browse.
April.—Rose-hips and browse of birch and willow.
May.—Rose-hips and sand-flowers (*Anemone pateus*).
June.—Rose-hips, grass, grasshoppers, and *Proconia costalis.*†
July.—Rose-hips, seeds of star-grass, and *P. costalis.*
August.—Rose-hips, grass, strawberries, and *P. costalis.*
September.—Rose-hips, grass, berries, and *P. costalis.*
October.—Rose-hips, grass, and various berries.
November.—Rose-hips, birch and willow browse, and berries of arbutus.
December.—Rose-hips, juniper berries, and browse.

This is, of course, a mere list of staples, as in reality nothing of the nature of grain, fruit, leaves, or insects comes amiss to this nearly omnivorous bird, but it illustrates the importance of the rose-hips, which

* Unfortunately, this is an error. One rarely hears the name Prairie *Hen* applied to the *Tympanuchus* in the prairie States, where its almost universal name is Prairie *Chicken*, often shortened to simply *Chicken*.—R. R.

† As this insect is found all summer, it may prove not *costalis*, but a nondescript.

are always attainable, as they grow everywhere and do not fall when ripe. In the course of my experience I have examined some hundreds of gizzards of the Prairie Chicken, and do not recollect ever finding one devoid of the stony seeds of the wild rose. It is probable that the service is mutual, for these seeds secure a better distribution after being swallowed by the grouse; and as they were passed out with possibly increased vitality they may germinate more readily for the thinning their outer coat would receive during the grinding operation.

After the disappearance of the snow and the coming of warmer weather, the chickens meet every morning at gray dawn in companies of from six to twenty on some selected hillock or knoll and indulge in what is called "the dance." This performance I have often watched. It presents the most amusing spectacle I have yet witnessed in bird life. At first, the birds may be seen standing about in ordinary attitudes, when suddenly one of them lowers its head, spreads out its wings nearly horizontally and its tail perpendicularly, distends its air sacs and erects its feathers, then rushes across the "floor," taking the shortest of steps, but stamping its feet so hard and rapidly that the sound is like that of a kettle drum; at the same time it utters a sort of bubbling crow, which seems to come from the air sacs, beats the air with its wings, and vibrates its tail so that it produces a low, rustling noise, and thus contrives at once to make as extraordinary a spectacle of itself and as much noise as possible.

As soon as one commences all join in, rattling, stamping, drumming, crowing, and dancing together furiously; louder and louder the noise, faster and faster the dance becomes, until at last, as they madly whirl about, the birds are leaping over each other in their excitement. After a brief spell the energy of the dancers begins to abate, and shortly afterwards they cease and stand or move about very quietly, until they are again started by one of their number "leading off."

The whole performance reminds one so strongly of a Cree dance as to suggest the possibility of its being the prototype of the Indian exercise. The space occupied by the dancers is from 50 to 100 feet across, and as it is returned to year after year, the grass is usually worn off and the ground trampled down hard and smooth. The dancing is indulged in at any time of the morning or evening in May, but it is usually at its height before sunrise. Its erotic character can hardly be questioned, but I can not fix its place or value in the nuptial ceremonies. The fact that I have several times noticed the birds join for a brief set-to in the late fall merely emphasizes its parallelism to the drumming and strutting of the partridge, as well as the singing of small birds.

The whole affair bears a close resemblance to the maneuvering of the European Ruff, and from this and other reasons I am inclined to suspect the Sharptail of polygamy. When the birds are disturbed on the hill they immediately take wing and scatter, uttering, as they rise,

their ordinary alarm note, a peculiar vibratory "*cack, cack, cack.*" This is nearly always uttered simultaneously with the beating of the wings, and so rarely, except under these circumstances, that at first I supposed it was caused by the wings alone, but since have heard the sound both when the birds were sailing and when they were on the ground, besides seeing them fly off silently. They have also a call—a soft, clear whistle of three slurred notes, E A D—and a sort of grunt of alarm, which is joined in by the pack as they fly off. Their mode of flight is to flap and sail by turns every 40 or 50 yards, and so rapid and strong are they on the wing that I have seen a chicken save itself by its swiftness from the first swoop of a Peregrine Falcon, while another was seen to escape by flight from a Snowy Owl.

The nest of this species is placed in the long, rank grass under some tuft that will aid in its concealment, and is usually not far from a tract of brush land or other cover. It is little more than a slight hollow in the ground, arched over by the grass. The eggs, usually fourteen but sometimes fifteen or sixteen in number, are no larger than those of the common pigeon, and are actually smaller than those of the Upland Plover, a bird which is only one-eighth of the chicken's weight. Immediately before expulsion they are of a delicate bluish green; on being laid they show a purplish grape-like bloom; after a few days exposure they become of a deep chocolate brown, with a few dark spots. After a fortnight has transpired they are usually of a dirty white; this change is partly due to bleaching and partly to the scratching they receive from the mother's bill and feet.

A partial history of the young in a wild state is briefly as follows: At the age of 6 weeks they are fully feathered and at 2 months fully grown, although still under guidance of the mother at this time. There is usually not more than six or seven young ones left out of the original average brood of fifteen, which statement shows the number of chicks which fall a prey to their natural enemies, while many sets of eggs also are destroyed by the fires which annually devastate the prairies. As the fall advances they gather more and more into flocks and become regular visitors to the stubble fields, and, in consequence, regular articles of diet with the farmers until the first fall of snow buries their foraging grounds and drives them en masse to the woods.

During the summer the habits of the chickens are eminently terrestrial; they live, feed, and sleep almost exclusively on the ground; but the first snow makes a radical change. They now act more like a properly adapted perching bird, for they spend a large part of their time in the highest trees, flying from one to another and perching, browsing, or walking about among the branches with perfect ease, and evidently at this time preferring an arboreal to a terrestrial life. When thus aloft they are not at all possessed of that feeling of security which makes the similarly situated Ruffed Grouse so easy a prey to the pot-hunter. On the contrary, their perfect grasp of the situation usually

renders them shy and induces them to fly long ere yet the sportsman has come near enough to be dangerous.

Like most of the members of its family, the Prairie Chicken spends the winter nights in the snow, which is always soft and penetrable in the woods, although out on the plains it is beaten by the wind into drifts of ice-like hardness. As the evening closes in the birds fly down from the trees and either dive headlong into a drift or run about a little and select a place before going under. The bed is generally about 6 inches from the surface and a foot long from the entrance. Each individual prepares his own place, so that a flock of a dozen chickens may be scattered over a space of 50 yards square. By the morning each bird's breath has formed a solid wall of ice in front of it, so that it invariably goes out at one side. The great disadvantage of the snow bed is, that when there the birds are more likely to become the prey of foxes and other predaceous animals, whose sagacious nostrils betray the very spots beneath which the unsuspecting bird is soundly slumbering. I am inclined to think this is the only chance a fox has of securing one of the old birds, so wary are they at all other times.

As the winter wanes it is not uncommon for a snowstorm to be accompanied by sleet. The storm at once drives the chickens into the drifts and afterwards levels the holes they formed in entering. The freezing of the sleet then forms a crust which resists all attempts at escape on the part of the birds, many of which, according to the account of hunters, are starved and thus perish miserably. I met with a single instance of this myself.

Before the winter is over, many of the birds, by continuously pulling off frozen browse, have so worn their bills that when closed there is a large opening right through immediately behind the hook.* Early in April the few that have survived the rigors and perils of their winter life spread over the prairie once more and soon scatter to enter on their duties of reproduction.

The growth and shedding of the pectinations on the toes I have recorded at length, and not having heard of any use for them, conceived the idea which I have already published (1883), that they are intended to act as snowshoes, and the fact that they grow in the fall and continue in perfection all winter, only dropping off after the snow is gone, justifies this conclusion. The same remark applies to the similar appendages of the Ruffed Grouse. The tail seems to present a curious specialization, most marked in the outer feathers; its chief function in life appears to be making a noise. The central pair of soft, long, silent feathers stand out like monuments of what the tail used to be in the palmy days of the species, when not mere hubbub in the madding crowd on the noisy dance-hill, but dainty decoration was the charm by which chiefly the pediocætes wooed and won his mate.

* The same remark applies to the partridge.

101. Ectopistes migratorius. Wild Pigeon.

Tolerably common summer resident of wooded regions; countless flocks in Red River Valley late May and early June, 1873; breeding; a few seen in Turtle Mountain (Coues). Dufferin: Arrived May, 7, 1874 (Dawson). Winnipeg: Summer resident; tolerably common (Hine). Ossowo: Rare; breeding; 1885, first seen, two, on April 18; next seen, April 19; seldom seen here (Wagner). Oak Point: 1884, arrived June 20 (Small). Portage la Prairie: Common summer resident; arriving about the first week in May, departing at the end of September; on May 21 fresh eggs were found (Nash). Sarden Island, Lake of the Woods; Pennawa River; Fort Garry, 1858, pigeon nets were in use near Fort Garry; Portage la Prairie, 1858, June 17, pigeons were flying in vast numbers over the Assiniboine; Souris River, near Spencer Knob, 27 June, 1858, vast numbers of pigeons were flying in a northwesterly direction (Hine). Found a few breeding on Waterhen River in 1881; about a dozen nests; in early fall saw great numbers in the Swan River region (Macoun). Carberry: Tolerably common spring migrant; probably breeding; south slope of Riding Mountain (Thompson). Two Rivers: 1885, on May 14, saw several; they did not alight (Criddle). Shell River: 1885, first seen, five, on June 15; odd pairs breed here (Calcutt). Qu'Appelle: Occasional; May 10 (Guernsey).

On May 17, 1884, saw flocks of wild pigeons flying westward, and on July 22, Portage la Prairie, saw a number in the woods along the river. Apparently they breed in this region, and if so, no doubt as isolated pairs, for I am not aware of the existence of any extensive rookeries in the province.

Pigeons of a small size, not larger than a thrush, are, in some summers, found as far north as Churchill River. The bill is of a flesh color, legs red, and the greatest part of the plumage of a light lilac or bluish. In the interior parts of the country they fly in large flocks and perch on the poplar trees in such numbers that I have seen twelve of them killed at one shot. They usually feed on poplar buds and are good eating, though seldom fat. They build their nests in trees, the same as the Wood Pigeons do; never lay but two eggs, and are very scarce near the seacoast in all the northern parts of Hudson's Bay. (Hearne.)

Merne rouck pigeons. The first species I shall take notice of is one I received at Severn, in the year 1771, and, having sent it home preserved to Mr. Pennant, he informed me it was the migratoria species. They are very numerous inland and visit our settlement to the southward in summer. They are plenty about Moose Fort and inland, where they breed, choosing an arboreous situation. The gentlemen number them amongst the many delicacies Hudson's Bay affords our tables. 'T is a hardy bird, continuing with them till December. In summer their food is berries, and when these are covered with snow they eat the juniper buds. They lay two eggs and are gregarious. * * * About twenty-six years ago these pigeons migrated up as high as York Fort, but continued only two days. (Hutchins MSS.; Observations on Hudson's Bay, 1782.)

A few hordes of Indians that frequent the low flooded tracts at the south end of Lake Winnipeg subsist principally on the pigeons during a period of the summer when the sturgeon fishing is unproductive and the *Zezania aquatica* has not yet ripened, but

farther north these birds are too few in number to furnish a material of diet. (Richardson, 1827.)

Garden Island, Lake of the Woods. Large flock of Passenger Pigeons (*Columba migratoria*) flew backwards and forwards over the island, occasionally alighting in dense masses in the small groves. (Hind, August 24, 1857.)

In a wheat field opposite St. James Church (2 miles west of Fort Garry) were several pigeon traps, constructed of nets 20 feet long by 15 broad, stretched upon a frame. One side was propped up by a pole 8 feet long, so that when the birds passed under the net, to pick up the grain strewed beneath, a man or a boy, concealed by a fence or bush, withdrew the prop by means of a string attached to it, and sometimes succeeded in entrapping a score or more of pigeons at one fall. Near the net some dead trees are placed for the pigeons to perch on, and sometimes stuffed birds are used as decoys to attract passing flocks. (Hind, 1858.)

On Waterhen River, June 23, 1881, I found a few wild pigeons breeding. There was under a score of nests and they were variously placed, some of them but 10 feet from the ground and not in large trees. They were such flimsy structures that the eggs were clearly seen through the interstices from below, and one old bird was shot as she sat.

In the latter part of August and the early part of September I saw great flocks on the Upper Assiniboine, and on Swan River above Livingston. They were feeding on the berries of *Cornus stolonifera*. In all my travels in the northwest I have never since found them breeding. (Prof. John Macoun in MSS.)

I think, too, we have far less birds than formerly, especially wild fowls and pigeons. I remember when I used to see flocks of pigeons following the course of the Red River which were so large that the front of each flock was out of sight in the north whilst the tail was out of sight in the south, but they never come now. (Donald Murray's statement in 1887 to Miller Christy, referring to the early days of the colony.)

They breed early, as I shot a female on May 31, 1884, containing an egg properly shelled and just ready for extrusion.

They do not in this locality build in colonies, but place their nests singly, usually in small oaks, the males at the time the females are incubating keeping in small flocks.

On the 27th of June, 1885, I shot fourteen of these birds, all males, each one of them having its crop crammed full of green caterpillars, mostly of one species of *geometra*.

Early in July the young appear with the old ones of both sexes. (Nash, in MSS.)

102. Zenaidura macroura. Mourning Dove.

Rare summer resident of the southern part of the first prairie steppe; common at Pembina in June (Coues). Winnipeg: Rather rare (Hine). Portage la Prairie: Tolerably common summer resident near here, breeding in small wild plum trees; arrives in May; nest found containing two eggs, on which bird was sitting June 7, 1885; not observed by me near Winnipeg (Nash). Never seen at Carberry; once noted at Turtle Mountain, May, 1882 (Thompson). Qu'Appelle: Common summer resident; breeds; arrives May 12 (Guernsey).

103. Cathartes aura. Turkey Vulture.

Tolerably common in summer and probably breeding; frequently seen in the Red River region at the boundary (Coues). Winnipeg: One or two observed (Hine). Red River Settlement: On the 27th of April, 1859, the winter snow was covering the ground to the depth of a foot, while the rivers were still bound; the only part of the interior of

British North America, as far as I can ascertain, that it inhabits in the prairie country that lies to the south and west of Lake Winnipeg (Blakiston). Portage la Prairie: 1884; scarce summer resident; first seen May 23; occasionally seen in April and May, and again in September, generally near the Assiniboine River; not observed near the Red River (Nash). Tolerably common summer resident at Carberry; not known to breed; near Turtle Mountain; Fort Ellice; Coté's Reserve (Thompson). Two Rivers: Rare; two seen hovering over bank of river, May 2 (Criddle). Shot near Westbourne in 1881 (Macoun). Upper Assiniboine (Bell). Plains of the Souris near Pipestone Creek (Hurd, July, 1858). Qu'Appelle: Common summer resident; breeds; arrives May 20 (Guernsey). Shell River: 1885, first seen, two, on April 25; here all summer at times, but not breeding (Calcutt).

In Minnesota, abundant; breeding. The Turkey Buzzard usually selects the hollow prostrate trunk of a large tree for its nest. I found young birds nearly fledged as late as the 29th of July. There are usually two young, occasionally but one This bird is capable of withstanding considerable cold. I saw it on the 24th of October, and again on the 8th of December. (T. M. Trippe.)

104. Elanoides forficatus. Swallow-tailed Kite.

A rare straggler; observed in northern Minnesota near the boundary (Thompson). Occasional at Pembina (Coues). Winnipeg: Accidental visitant; rare (Hine). Noticed at Selkirk, Pembina Mountains, and Fort Qu'Appelle (Hunter).

105. Circus hudsonius. Harrier, or Marsh Hawk.

Abundant summer resident, chiefly in the prairie regions; common along the boundary from Pembina to Rockies; next found at Pembina (Coues). Dufferin: Arrived before April 15 (Dawson). Winnipeg: Summer resident; abundant (Hine). Spring of 1859; did not observe it before the 28th of that month (April) at Red River Settlement (Blakiston). Ossowa: Common; breeding, 1885; last seen, one on November 12 (Wagner). Oak Point: 1884, arrived April 27; 1885, first seen, one on April 8; is common and breeds here (Small). Portage la Prairie: 1884; very common summer resident; first seen April 11; birds in the full blue plumage being occasionally seen; arrive early in April; are abundant by the middle of the month; depart at the end of October (Nash). Carberry: Our commonest hawk; summer resident near Turtle Mountain; near Shoal Lake, west; the adults in blue plumage common in spring and fall, rare at other times (Thompson). Brandon: April 10, 1882 (Wood). Common in the Winnepegosis region, but exceedingly abundant on the marshy prairies from Livingston southward along the Assiniboine, September, 1881 (Macoun). Qu'Appelle: Common summer resident; breeds; arrives April 15 (Guernsey). Adult male, Cumberland House (Richardson). Severn House (Murray).

September 28, 1882: The full plumaged Gray Harriers are here once more. This bird comes earlier in the spring than the brown plumaged

harrier, goes farther north to breed, migrates later in the fall, and flies differently, so that if it is the same bird, the case is a unique one.

On October 3, 1883, watched a Blue Harrier capture a junco in full flight; the latter exhibited some extraordinary feats on the wing, but the harrier was always close behind, and followed up, down, into the grass or along, and in a few seconds he flew off with the sparrow in his talons. I am very sure the powers of flight of this hawk are much beyond those of a Brown Harrier.

On October 3, near Shoal Lake, west, saw a Blue Harrier trying to catch some teal that were on a very small shallow pond. Each time the harrier pounced the teal would dive below the surface, and at the same time splash the water up as high as possible. This happened several times, and at length the baffled harrier gave up the attempt.

On May 13, 1884, saw a hawk flying over the slough with a deeply undulated flight. At each ascending part it uttered a cackling which sounded like something between the shrill piping of a snipe and the chuck-chuck of a rooster calling the hens; then it dashed on the downward line, repeating the maneuvers for half a mile, when it was lost to sight. This bird seemed black above, and pure white beneath; tail, long.

On May 19 a harrier was sitting on a tussock in the middle of the slough. It was easily approached by an old and never-failing plan. I fixed my eyes on a point in the horizon, which was so situated that by going toward it I must pass within 30 yards of the hawk. I then walked straight to my mark, never turning my head or even my eyes, else the bird had surely flown. When at the nearest point I turned suddenly; immediately the hawk sprang, but at once fell to my gun.

It proved a female and had a *white breast* and slaty-brown back. In the gizzard was a gopher which had evidently been stealing wheat, when the harrier caught and lynched him on the spot. Certainly this is a plea for the hawk. Six of the grains were in good condition, though much swollen. They were planted but failed to germinate, doubtless because saturated with the harrier's gastric juice, but most likely the greater part of the gopher's cargo was spilt where he was devoured, so that this illustrates one natural mode of distributing seed.

I have made many other observations on the food of this bird in Manitoba, and all point to gophers as the staple, blackbirds and sparrows as occasional varieties. I once saw an old one trying to capture some young ducks, but the mother duck contrived to keep him at bay by splashing until the ducklings escaped into cover.

May 20, saw a hawk flying in a most extraordinary fashion. Its course was excessively undulated, with the ascending parts nearly perpendicular, the descending in a long oblique, the outline being that of a huge rip-saw. During the first upward bound it uttered a continuous cackling, much like the note of a snipe, then plunged silently downward, again to bound upward; when at the highest point this time it turned a

complete somersault, then plunged again, and repeated this series of actions a number of times, then set its wings rigidly and sailed away in a straight line, never flapping once till out of sight. It was a gray hawk with a white breast and seemed a perfect master of aërial navigation.

July 13, at the slough saw a hawk sailing about and squeaking like a snipe. It continued sailing very near and seemed in no fear of me, but of course I had no gun. A kingbird launched out from a bush and gave chase; the hawk rose higher and higher till the kingbird was lost to sight; soon the latter returned and afterward the hawk. This happened twice and made me think it was a Red-tailed Buzzard.

As he did not seem disposed to go away, I went home and in half an hour returned with a gun. He was still there and soon again came sailing and squeaking over me. He made a swoop which brought him very near; then *crack!* and he fell headlong. I ran to pick up my prize to find the Arctic hawk, at last, and lo! my old friend the harrier, the commonest of our predacious birds.

August 9, I shot an adult female harrier at the same place as last taken. She also was uttering the peculiar cackling, though not flying after the manner described. Her gizzard contained a mass of pulp which was full of what looked like raspberry seeds. I think it likely she had swallowed a gopher whose stomach was full of that fruit.

On September 9, on the edge of the grain field, in the evening, saw a harrier (brown) pounce on a Prairie Chicken, but the latter struggled, and at length got free and made a dash for life, with the harrier in close pursuit, but to my surprise the chicken gained at every beat, and in less than 100 yards the harrier gave up the chase and turned about in search of gophers, grasshoppers, and other game more within his reach.

The Marsh Harrier (*Circus cyaneus hudsonius*) is a very common bird throughout Manitoba, and may often be seen sailing over the prairies, the sloughs, or the wheat fields. One morning late in August I remember counting a dozen round one house. * * * Nearly all the individuals I saw were in the brown plumage; only three or four wore the adult bluish ash-colored dress. This bird comes often and inspects the settlers' chickens, but seldom carries off any except very young ones—gophers, mice, and grasshoppers being its usual prey. It is exceedingly easy to shoot and one or two dead ones may often be seen lying round a farmer's house. The harrier became a much scarcer bird as September wore on (Christy.)

These hawks are very fond of eating the ducks that are killed and lost by sportsmen, and where much shooting is done in a marsh you may see numbers of carcasses of ducks half devoured by this bird. On one occasion a harrier tried to take from me a wounded teal that had crossed a creek on the bank of which I was shooting. Before I sent my dog for the duck the hawk came, hovering over the creek, and seeing the prostrate bird immediately pounced on its back, but the teal fluttered and threw him off for the moment. As I wished to see the result I kept perfectly quiet, and the hawk, not noticing me, settled down on the ground about 2 feet from the duck and watched for some time; at last, apparently tired of waiting for the wounded bird to die, he went off. These birds should never be destroyed; as, though occasionally they may take a young or wounded duck, their prey is usually mice and gophers. (Nash, MSS.)

106. Accipiter velox. Sharp-shinned Hawk.

Summer residents of woodlands. Dufferin: Arrived before April 15 (Dawson). Mouse River at the boundary (Coues). Winnipeg: Summer resident; tolerably common; April 15 to October 15 (Hine). Specimens in Smithsonian Institution from Red River Settlement, and from between Hudson's Bay and Lake Winnipeg (Blakiston). Portage la Prairie: Common in spring and autumn, but not often seen during the summer; arrives in April and departs in October; in 1884 arrived, first appearance, April 16 (Nash). Carberry: One taken October 5 (Thompson). Observed in Winnepegosis county; saw a number near Coté's Reserve, and shot one at Livingston, September 11, 1881 (Macoun).

This audacious little robber is about the commonest hawk in the wooded section about Portage la Prairie, but owing to his hiding propensities he is not so much noticed as the others. His usual habit of hunting is thus: He skims along low amongst bushes and shrubs, constantly alighting on the branches, and woe to the unfortunate sparrow or other small bird that fails to drop into the grass before he arrives, for if the little bird is once seen it rarely escapes; for, unlike most hawks, this fellow will follow his prey through the thickest places, hopping and running after him with the greatest rapidity. I have, when quietly seated in the brush, been frequently warned of the approach of this hawk by the sudden cessation of song around me, and the utterance of a peculiar plaintive squeak by the small birds in the vicinity, upon which they all drop down and hide, and in a moment my ghost-like friend glides like a shadow on the scene, drops on a low branch for a second, and then passes on. Sometimes, however, I have seen this hawk strike at and pursue a bird in the air, like a true falcon, and on one occasion an impudent villain of this species glanced past my head and snatched up a plover I had shot, carrying it off in front of my dog's nose, and this he did before the report of my gun had died away, and through the smoke from the charge. The act so astonished me that I forgot to shoot at him until he was too far off; when I did remember, I sent the other charge after him, but without effect; he did not even drop his ill-gotten spoil. On another occasion one followed a redpoll almost into my buggy. On the 22d of August I saw one strike at a Bronzed Grackle and carry it off from where it was feeding in a public street, at Portage la Prairie, although there were many people about.

I have occasionally seen this bird hover like the kestril, but very rarely. (Nash, in MSS.)

107. Accipiter cooperi. Cooper's Hawk. Chicken Hawk.

Winnipeg: Summer resident; tolerably common (Hine). I have seen them at Oak Lake, west of Brandon, where they breed; and saw a pair on 10th May, 8 miles south of Troy depot, Canadian Pacific Railway, west (R. H. Hunter). North to the Saskatchewan (Brewer).

108. Accipiter atricapillus. American Goshawk.

Tolerably common fall and winter visitant; usually appearing in August. Winnipeg: Winter visitant abundant; November 15 to March 1 (Hine). Portage la Prairie (Nash). Carberry: Tolerably common in fall and early winter; usually appearing in August; not noted during breeding season. Rat Portage: Fall (Thompson). A regular but uncommon winter visitor; more frequently seen near the Red River near Winnipeg (Nash).

On August 27, 1883, George Measham brought a large goshawk that he had shot by the north slough; young female; length 24, extension 44; weight, 2½ pounds good. It is a very big, heavy bird; legs, all reticulate except in front, where they are scutellate; plumage very pale, streaked all over; a white line over the eye; its throat and stomach were filled with bad meat, but there was nothing to show of what kind.

On September 14 I secured a living goshawk by a curious combination of circumstances. Some days before a harrier had been shot over at Wright's while chasing the chickens and was left where it fell; and on the day in question the chickens were picking at the now odorous body of their late foe, when three great gray hawks came wheeling overhead, and presently one of them pounced down among the fowls. Away they ran for shelter, all save one, which was carried off and the three pirates circled away and down onto the prairie to enjoy their repast, where, lo! to their infinite disgust, they found that the only chicken which had not fled was the dry and musty dead harrier. In the meantime I had started after them with the gun, and by the never-failing trick of pretending not to see them, for there was not a stick of cover, I got within shot and secured a bird with each barrel. One of them was only winged and after a short chase he was captured and taken home.

Here I kept him for over a month, but finding that his wing was not likely to heal I killed him. During the time he lived he lost no whit of his inborn ferocity; he was kept chained by the entrance to the garden, and so far as hens were concerned he answered perfectly as a gate. He was always ready for a fight when any dog came near; but I found that by approaching cautiously I could seize his feet, after which he was powerless to inflict any injury.

The flight of this fine species is worthy of the true falcon, for it is so dashing and swift that the common buzzards look very slow and clumsy in comparison.

January 13, 1887, at Rat Portage, was shown the remains of a goshawk shot here last fall.

I have seen these birds strike at Sharp-tailed Grouse and at tame pigeons, but they do not seem to be successful in their efforts very often, for I never saw them catch one nor do they appear to follow up their game after making their dash at it. (Nash, in MSS.)

109. Buteo borealis. Red-tailed Hawk.

(Possibly *krideri*, as a breeding specimen from Chippewa Lake, Minnesota, is so identified by Mr. Ridgway.) Tolerably common summer resident of the wooded regions; one taken on Mouse River, at the boundary, in September (Coues). Winnipeg: Summer resident; rare (Hine). I saw numbers at Red River Settlement in the spring of 1859 (Blakiston). Portage la Prairie: Tolerably common summer resident,

frequenting the skirts of the woods (Nash). Carberry: Common summer resident in wooded localities near here; Duck Mountain, observed breeding (Thompson). Brandon Hills: Nesting, June 4, 1882 (Wood). Shot one fine specimen at Livingston, September 13, 1881 (Macoun). Shell River: 1885, first seen, one, male, on April 5, afterward seen every day; is a common summer resident, and breeds here (Calcutt).

By June 10, 1884, the Red-tailed Hawk was an abundant species in the Duck Mountain wooded region, much more so than the Swainson Hawk, which is the prevailing species on the prairie region of southern Manitoba. June 18, at Duck Mountain, shot a Red-tailed Hawk, female; length 20, extension 48. It seems to me to be the eastern bird, and not at all approaching *krideri*. On July 9, as I drove with Dr. Gilbert past a part of the plain on which were a few scrub-oaks, I saw a Red-tail perched on a post. As we drew near he flew, but dropped a small animal; but before he could secure it he was attacked by another Red-tail, and for some time their brilliant tourney in the air was an interesting sight. Again and again the uppermost bird would charge swiftly on the other, which would thereat alight on the earth and so avoid the onslaught, or if too high for that means of escape would, with a graceful sweep, turn on his back and strike upwards with his heavy feet. The combat was ended at last by the weaker taking refuge in an oak. In the meantime I had stepped in and secured the booty which caused the strife. It was a very fine specimen of the Scrub Gopher (*Spermophilus franklini*), a rare animal; so it was thankfully received as an addition to my collection.

This species seems to be the complement of Swainson's Hawk in Manitoba, adhering to the forest regions, while the latter is found only in the more open places. The differences of habit presented by these two species are slight but quite appreciable, and are of a class that, taken as a whole, incline me to lay down a law that no two species of animal have the same exact environment, aside from the hypothetical fact that no animal fulfilling exactly the same conditions would necessarily be of the same species. I find that each species, as it is further studied, shows that it is adapted to a set of conditions slightly different from those of its nearest congeners.

110. Buteo lineatus. Red-shouldered Hawk.

Rather common in the eastern or wooded part of the province (R. H. Hunter). One fine specimen shot on Oak Hills, November 3, 1881 (Macoun).

111. Buteo swainsoni. Swainson's Hawk. Common Henhawk.

Very abundant summer resident in the prairie region. Very abundant 50 miles west of Pembina Mountains, at Turtle Mountain, and at Mouse River, along the boundary (Coues). Oak Point: 1884; arrived April 12 (Small). Winnipeg: Summer resident; abundant (Hine). Port-

age la Prairie; 1884; abundant; summer resident; first appearance in 1884, April 10; frequenting the open prairie and breeding in conspicuous places, usually in a small tree standing among low scrub (Nash). Carberry: Very abundant; summer resident; breeds perhaps twice each season; arrives middle of April, departs middle of October; near Brandon, Long River; near Turtle Mountain; in prairie region (Thompson). Two Rivers: 1885, first seen, one, on March 11; next seen, one, March 14; pretty common and breeds here (Criddle). Dalton: 1889, first seen, two, on March 22; next seen on March 23; is common, and breeds here (Youmans). Shell River: 1885, first seen, two, on April 9; afterwards seen nearly every day; it is common all summer and breeds here (Calcutt). Abundant on the prairies along our route (Macoun). White Sand River; May 4, 1884 (Christy).

Several times I have been guided to a hawk's nest by the old ones themselves, who, in their tremor of anxiety for their young, have flown half a mile or more to meet me, circling high above me and uttering those long piercing screams, with an intonation of distress that was unmistakable. On one occasion, while trapping Gray Gophers (*Spermophilus richardsoni*) at a teeming colony of this rodent, a hawk flew repeatedly over me and back and forth between me and an adjoining wooded slough. At first, I supposed I was trespassing on his hunting ground, especially when presently I saw him catch a gopher, and with it sail away so directly towards the trees that the inference of his nest being there was too palpable to be mistaken; I therefore followed him, and after a brief search discovered the nest in a low, dead poplar tree. Both old ones were screaming overhead, so that it was with certainty of a prize that I proceeded to climb the tree. As soon as my head appeared on the level of the nest, one of the three young ones escaped, a second could barely fly, yet it swooped out aslant into the scrub, 20 yards away. The third could not fly at all. Thus it seemed that they were of different ages. The nest contained one gopher. The two young birds were secured with little trouble; at first, the only defense they made was gaping silently, with feathers bristling and wings spread forward; but on my trying to tie their feet, No. 3 seized a forefinger in each claw and so held them till the blood trickled from two or three places; he only let go his hold when I spread his legs and brought my knee to bear on his breast.

Meanwhile the old ones were careering overhead, and on the back of the lowest was a kingbird, whose silent diligence and energetic application to the task of plucking the hawk was most amusing. He took several rides of over a hundred yards, and ultimately the hawk approached so near to me that she fell to a charge from the gun. This proved to be the mother. Her gizzard contained a Striped Gopher and part of a quaily; the rest of the quaily was in her throat, with one foot in her mouth; so full was she that I wondered how she was able to scream so much.

One of these young hawks was accidentally killed by a wagon, but the other throve in my hands and soon became reconciled to confinement in a barn, where in process of time he was joined by another of his own kind, a Peregrine Falcon, two Horned Owls and a Crane. Very soon the hawk evidently noticed a connection between my visits and his meals, and in a few days he learnt to greet me with an oft-repeated scream, much like that of the adults. His tameness increased until he would run screaming to be fed whenever he saw me. In a week or so more he could fly tolerably well, and was readily taught to come screaming and sailing about my head in response to the call, "Come, Dick." Then, after a performance of voice and wing long enough to give sufficient eclat to the forthcoming grand finale he would swoop past with the rapidity of at least a barnyard hen, and bear away my cap unless I held up in my hand a bird or gopher, which he never failed to truss. One foot only was used for small birds, usually his left, but if both gripped it was not at the same place, one foot being held far in advance of the other.

It is hard to say to what extent this bird might have been tamed, for during my absence for a week or so he reverted entirely to his original habits, and was thenceforth but little better than the wild kinsman that shared the building with him. The history of this latter bird is worth relating. I was looking out of the window when I chanced to see a hawk alight on a fence some 160 yards away; it was very conspicuous, having a white head. This aroused my curiosity to know what strange species it was. I took my rifle and by a wonderfully lucky shot, which I could not repeat for a kingdom, temporarily stunned the bird, the ball barely grazing its crown. It proved to be an old one, and its head was white chiefly behind and more or less streaked with brown. When it revived it was placed in the barn and seemed well enough, but refused all food, and for twelve days, so far as I know, it ate nothing. By this time it was reduced to a mere skeleton, but on the thirteenth day an idea seemed to dawn on it, and it made a hearty meal off a gopher, and continued well until one day the Horned Owls, its fellow captives, were left with insufficient provender, whereupon they killed the hawk and devoured it to make up the deficiency. On a later occasion poor Dick received a similar sepulture.

The brood from which Dick was taken, be it observed, was not able to leave the nest until July 24. I have several times found the bird with one or more eggs on May 20; have seen it setting late May and early June; on June 26 I found a nest with four eggs, nearly hatched; and again on June 28 I found one with young ones out and one egg not hatched. On August 8 I was led by a pair of old ones to the nest, which at that time contained only their youngest chick, then just able to fly a little. On the same day, in a different locality, I shot an old one which was carrying a meadow lark presumably home to feed its

young. So that these instances rather confirms the idea suggested by Dr. Coues, that this hawk may breed twice in a season.

As already indicated, the habits of this species are those of a Red-tail which has betaken itself to a prairie life, and in consequence its nest is in a lower situation and its flight less lofty, while it is also frequently seen sitting on the ground. For plowed fields, in particular, it manifests a partiality, perhaps because amid such surroundings it can most readily see and secure the gophers which constitute its principal food.

The nest of this bird is not peculiar. I have examined about fifty altogether, and have hitherto failed to find one that answers the published descriptions, which credit the bird with using a lining of hair and other fine material. All the nests examined early in the season were merely masses of sticks and twigs, with a slight hollow to contain the eggs, and had no special lining. But nests examined after the growth of the leaves—usually about the end of May—were more or less lined with twigs plucked with green leaves on them, and these when slightly wilted readily flatten down and form a wind-proof screen.

In general appearance this nest is much like that of the red-tail, but the position is different, being usually less elevated. I have seen many nests that I could reach from the ground. The favorite sites are the crown of a dense willow-clump, or the highest fork of a low scrub oak; occasionally I have observed the nest at a height of 20 or even 30 feet, in some poplar, but this is unusual.

The eggs are commonly three but sometimes four in number; they are more or less spherical and vary much in color. The young, when hatched, are the purest and downiest looking of innocents, and it is only on examination of the tiny though promising beak and claws that one can credit that little snowball with the "makings" of a ruthless and bloodthirsty marauder.

The diet provided for them by the old ones consists of animal food entirely; about 90 per cent. of it, probably, being gophers and insects, and the rest composed chiefly of young song and game birds.

The name henhawk is a misnomer as far as this species is concerned. All the hen lifting I have seen done in Manitoba was the work either of the peregrine or the goshawk.

August 5, 1882, near Badger Hill: On the way out here I got a fine buzzard; its crop was full of grasshoppers and mosquitoes. (Wood.)

112. Buteo latissimus. Broad-winged Hawk.

In Ontario it is essentially the hawk of thick foliage and densest forest; very rare; summer visitant. Winnipeg: Summer resident; rare (Hine). Fort Garry (Ridgway). Carberry: May 12, 1884, saw what I took to be a Broad-winged Buzzard; did not collect it; have not seen the species here before (Thompson).

113. Archibuteo lagopus sancti-johannis. American Rough-legged Hawk.

Migrant; common fall visitant. Less common in the spring. Winnipeg: Rare migrant; "have seen only three specimens in as many years;" 1884 (Hine). Carberry: Rare in spring; tolerably common in fall; Rat Portage (Thompson). Oak Point 1885; first seen, one, on April 7; next seen, April 8; became common on the 10th: breeds here? (Small). Portage la Prairie: Common in spring; abundant in autumn (Nash). Received both from Severn House and Trout Lake Station (Murray).

This bird is far from being common in Manitoba. On the Big Plain I have seen only about a dozen specimens, and of these about one-fourth were in the black plumage.

Throughout the Assiniboine Valley, so far as noted, it is found only in the spring and fall. It generally appeared in the neighborhood of Carberry when the nights began to be a little frosty. The earliest I have observed was on September 9. This was a black specimen; it was perched on the top of the tallest tree in a wet place on the prairie; when it saw me, 200 yards off, it flew with heavy, flagging flight straight to the next slough, where also it took its station on the highest available perch. This fairly represents the action of all that I have noticed; they are very shy and frequent the trees in the neighborhood of swampy places.

Common in spring; abundant in autumn. Sometimes very early in the morning, particularly if the weather should be cold and misty, I have seen a dozen or more of these hawks at one time sitting about on the fence-posts or on the broken ground in the most listless, dejected-looking manner possible. Having very seldom found anything in the stomachs of these birds, I fancy it is "a long time between meals" with them. (Nash, in MSS.).

114. Archibuteo ferrugineus. Ferruginous Rough-leg.

Probably Manitoban; Pembina Mountain at the boundary; breeding; early in July, 1873 (Coues). I have seen a specimen that was taken immediately to the west of the province (Thompson).

115. Aquila chrysaëtos. Golden Eagle.

Very rare; possibly resident. Winnipeg: Rare; apparently resident (Hine). Red River Valley: Very rare (Hunter). Portage la Prairie: 1884, very scarce; not seen by me (Nash). Big Plain (Thompson).

116. Haliæëtus leucocephalus. Bald, or White-headed Eagle.

Very rare summer visitant; probably breeding; frequent on Red River from Minehead to Pembina; several nests noticed (Coues). James Falls, Winnipeg River; eagles (Hind). Winnipeg: Summer resident; tolerably common; April to October 1 (Hine). Rare; "reported to be frequently seen on Lake Manitoba" (Nash). Mouth of Waterhen River, a pair; one at Cathead, Lake Winnipeg (Hind). Common between lati-

tude 62° and Lake Superior; at Cumberland House March 24 (Richardson). Qu'Appelle: Occasional; does not breed; April 30 (Guernsey).

The country west of the *Quinipique* Lake has dry islands or hills with marshy bottoms full of wood and meadows. On the east side is a fine flat country full of woods until they come to the bottom of the mountains which are betwixt this and the upper lake. On a lake on that side, betwixt this lake and Lake *Du Bois*, are the *Migechichilinious*, or Eagle-eyed Indians; these, he says, are not called so from their having a sharp sight, but upon account of many eagles, which breed in islands of that lake. (Dobbs, p. 35.)

On an island near the mouth of the Waterhen River. * * * We found a pair of White-headed Eagles engaged in fishing, and as we came suddenly upon them after rounding a point, one of them dropped a fine whitefish he had just caught, which was immediately seized and appropriated by our men for their own breakfast.

On September 8, near Cattail Lake, Winnipeg, the party was reduced to great straits for provisions, when one chanced to shoot an old bald eagle. By eating nearly every portion of the animal, except the feathers, we managed to make him serve for two or three meals.) Hind. 1858).

Rare. On the 21st of March, 1885, Mr. T. A. Newman, of Portage la Prairie, showed me the wings of three of these birds that he had bought from an Indian, who said he had shot them south of the Assiniboine River. Mr. Newman also told me he had a year or two before shot one in full plumage on Lake Manitoba.

On the 25th of October, 1886, I saw a splendid bird in full plumage flying southward just over the trees on the bank of the Red River. (Nash, in MSS.)

117. Falco rusticolus obsoletus Black Gyrfalcon.

Probably Manitoban in winter. Has been taken in Minnesota a few times as a rare winter visitant; a specimen examined by Mr. Ridgway (Cooke). The inference from Hearne's narrative is that he also took this bird at Cumberland House, and if so it was probably of the same variety as those taken in Minnesota. Mr. Nash also reports seeing a supposed specimen fly over Portage la Prairie. This bird seems to follow the Willow Ptarmigan in winter; hence we would expect to find their southern ranges coincide.

They, like the other large species of hawks, prey much on the white grouse or partridge, and also on the American Hare, usually called here rabbits. They are always found to frequent those parts where partridges are plentiful, and are detested by the sportsmen, as they generally drive all the game off the ground near their tents; but, in return, they often drive thither fresh flocks of some hundreds. Notwithstanding this, they so frequently balk those who are employed on hunting service that the governors generally give a reward of a quart of brandy for each of their heads. Their flesh is always eaten by the Indians, and sometimes by the English; but it is always black, hard, and tough, and sometimes has a bitter taste.

The Indians are fond of taming these birds, and frequently keep them the whole summer; but as the winter approaches they generally take flight and provide for themselves. When at Cumberland House I had one of them, of which my people were remarkably fond, and as it never wanted for food would in all probability have remained with us all the winter, had it not been killed by an Indian who did not know it to be tame. (Hearne.)

The following from Hutchins seems to refer to this species:

It appears in these parts in the month of May, builds a nest with small sticks, feathers, and down, the two last plucked from its breast and lines the nest. It

chooses a lofty tree for its residence. The young brood are darker than the parents; they are commonly hatched about the latter end of July; it resorts to the plains and marshes. It is perpetually on the wing, skimming along the surface of the earth, and preys on small birds, plover, and ducks. (Hutchins MSS., Observations on Hudson Bay, 1872.)

Falco peregrinus anatum. Peregrine Falcon. Duck Hawk, or Bullet Hawk.

Much like the goshawk in movements and distribution; probably breeds in the neighborhood of large lakes. Winnipeg: Summer resident; tolerably common (Hine). Portage la Prairie; 1884, rare; saw two January 1, 1885 (Nash). Carberry: Common in the late summer and early fall; Boggy Creek, near Coté's, October (Thompson). Two Rivers: Bullet Hawk first seen, one, on April 4 (Criddle). Shot one at Coté's Reserve on the Assiniboine, September 22, 1880; I first watched it pursue and capture a Prairie Chicken (Macoun). Trout Lake Station and Severn House (Murray).

On August 11, 1882, about 10 in the morning, we had to drive away two Peregrine Falcons that were raiding in our poultry yard. In the afternoon they returned, and one of them made a most determined effort to secure a hen, despite two shots fired at him. However, he escaped unhurt after the second discharge. He did not stoop from aloft, but skimmed low over the ground in making his attack.

September 9, 1882. While standing behind the stable to day I heard the turkey give warning, and immediately there was a whizz and a gray streak past me in the air; the poultry screamed and scattered, and I whistled and shouted just in time to turn the stoop of a Peregrine. Again and again he dashed down and was with difficulty balked, and only by the time a gun was procured did he finally make off. Two days before I had found a hen with her head bearing three deep gashes, and I doubt not they were received from the claws of one of these marauders, though how many of our poultry they really took I can not say. I never saw any actually taken, and we never knew the exact census of the barnyard, so do not know how many, if any, disappeared.

On the morning of September 18, I saw a Peregrine sitting on the fence, but he flew before I could get a shot at him and circled away above the barn, increasing his elevation at each gyre until about at the third wheel, when at a height of 200 or 300 feet he suddenly stopped, half closed his wings, and dived headlong into a field half a mile away. His descent was at least as rapid as the fall of a stone would have been, and as he swooped his wings were slightly and slowly expanded and closed again a number of times. What his victim was I never knew.

On July 26, 1884, secured a Peregrine in first plumage. This was shot by Mr. Gordon Wright, near Carberry, and sent to me. He described it as the "swift gray hawk;" it was raiding in his poultry yard, when he ran with his gun to the rescue and rapidly fired, but the swiftness of the bandit saved him each time for four shots, and he

fiercely and determinedly continued to dash around the buildings in pursuit of the fowls, when a fifth shot grazed his wing and brought him down. He is the very personification of fierceness and defiance, and his actions are full of snap. As soon as approached he hissed, and struck with his great talons so quickly that the eye could not follow the movement. I put him in a building along with a Swainson's Buzzard and a crane, and, oh! how clumsy and vulgar they both looked beside him. He is the royalest robber that ever I saw. His every motion is so full of untamable ferocity as to elude the eye; his eye is brighter and fiercer than an eagle's, but I am in hopes that with care I may succeed in taming him. August 2: Notwithstanding the gentlest treatment, the Peregrine continued to scorn all approaches, and the slightest attempt to touch him called forth in response only the dim flash of his massive horn-tipped feet, a fair warning of what may be expected should the liberty of handling be attempted. On entering in the morning, I found him sitting on the body of the crane; it is not certain that he was the murderer, but it is against him, that having left him undisturbed for an hour immediately afterward he made use of the time to devour the greater part of the crane's breast on one side, and that he and the buzzard subsequently picked the bones clean. August 12: The Peregrine died to-day, after a captivity of three weeks, no cause being assigned for his death. He was a young male of the year, I think. Besides the hissing menace already mentioned, he indulged in two other vocal efforts; one an exceedingly loud, piercing scream of anger, the other a reiterated shrieking, almost exactly like that of the kestrel, but stronger and in a deeper key.

Pay-pay nay seu Ka-cake. * * * They appear in our marshes in the beginning of June, and soon after make their nests in trees. It is composed of sticks and lined with feathers. They lay three or four white eggs. The young ones take flight in August, and the whole species leave us in September or the first week in October. They sometimes kill geese, but their usual food is ducks, plovers, partridges, and small birds. (Hutchins MSS., Observations on Hudson Bay, 1782.)

On September 11, 1883, at Carberry, about 4 p. m., a fine Peregrine came and sat on a fence close to the house. Just as I was about to fire at him with the rifle he rose and flew close over my head and around me. Then, after whisking over the chickens and putting them into a rare fright, he hovered for nearly a minute at about 40 feet above the ground as well as ever I saw a kestrel do, which surprised me. So stationary was he that I thought I might as well fire, as I had as good a chance of hitting him as on a fence. I did so, but of course missed him. (Christy, in MSS.)

119. Falco columbarius. Pigeon Hawk.

Chiefly in the migration; common. Dufferin: Arrived before April 15 (Dawson). Winnipeg: Summer resident; tolerably common (Hine). Ossowa: 1885, April 18; common April 23 (Wagner). Norway House (Bell). Common fall migrant at Carberry; noted also north of Petrel (Thompson). One shot at Livingston, September 13, 1881; common in Winnepegosis regions, breeding in the Assiniboine Valley, at Brandon,

and along the Qu'Appelle Valley (Macoun). Qu'Appelle: Tolerably common; arrives April 20 (Guernsey).

On September 9, 1883, a flock of five or six Pigeon Hawks came about the farm buildings. In general manners they were much like Sparrow Hawks, but they sailed more and flapped less. They were of course larger, and seemed more stoutly built; their duller color also was a distinguishing mark.

One trick of flight they had in common with the Whisky John, Shrike and others, namely, flying low over the ground towards a pos' or stump, and just as one expects to see them strike the bottom of it there is a sudden spreading of tail and wing, and the bird gracefully bounds straight up to the top and alights there. This species will sometimes hover, though they do not make such a practice of it as the Sparrow Hawks. This maneuver I have also observed, though in a still less degree, in the Peregrine. One collected was a female; length 12, extent 25. All above was dark brownish gray; all below, buff heavily streaked. Wings and tail show but few marks above; below are spotted with buff; in crop, a sparrow; in stomach, another. This band may have been a single family returning from their breeding place in the wooded mountains to the east.

120. Falco richardsonii. Richardson's Merlin.

Very rare. One taken at headwaters of Mouse River, Dakota, near the boundary (Coues). Shot at Fort Pelly in September, 1881 (Macoun).

121. Falco sparverius. American Sparrow Hawk.

Abundant summer resident; very abundant from Pembina along the boundary to the Rockies (Coues). One from between Hudson's Bay and Lake Winnipeg; one individual at Red River settlement on 22d April, in 1859 (Blakiston). Winnipeg: Summer resident; tolerably common (Hine). Oak Point: 1884, arrived April 20; 1885, first seen, one, on April 15; is common and breeds here (Small). Portage la Prairie: 1884, abundant summer resident; first appearance April 26, departing in October (Nash). Carberry: Abundant summer resident wherever there is large timber (Thompson). Very common; breeding along Red Deer, Swan, and Assiniboine Rivers; throughout the Winnepegosis region and in the various streams and valleys of the Northwest visited in 1880 (Macoun). Shell River: 1885, first seen, one male, on April 14; a transient visitant only (Calcutt). Qu'Appelle: Common; summer resident; breeds; arrives April 15 (Guernsey).

On July 26, 1884, while traversing the Carberry Swamp, I heard the loud, reiterated screeching of the kestrel, and on looking upwards saw one of these audacious birds following and dashing around an eagle, and endeavoring by every means in his power to intimate to the latter that his life was in imminent jeopardy—that, indeed, it was not worth a moment's purchase unless he instantly left the neighborhood

of his (the kestrel's) nest. When last I saw them over the trees, the eagle had apparently accepted the terms, and the kestrel was plying him with sundry sayings and maxims while he saw him safely out of his neighborhood.

In August they gather into small parties and hover about over the prairie, feeding principally on grasshoppers, though they are quite capable of capturing better game. On two occasions I have seen them kill and carry off meadow larks; these I shot in the act. Another time I found the remains of a red squirrel and a purple finch in the stomach of one, but the most extraordinary feat I ever saw one attempt was its attack on a crow. The hawk struck viciously at the crow, knocking him down into the road just in front of my house; the hawk dropped on the fence just over his intended victim, and sat there while the poor crow squatted close to the ground with his wings and tail spread out and mouth wide open looking the picture of terror. I had pulled up to watch the outcome of the performance, but unfortunately my horse moved and attracted the attention of the parties to the duel and they both flew off in opposite directions. The hawk could hardly have been driven to this bold act by hunger as it was late in the spring and there were numbers of small birds about.

Early in the morning of August 31, I saw a party of five or six of these hawks and a single Sharp-shin enjoying a regular romp around a deserted house on the prairie. They chased and dodged each other round and round the building, settling when tired on the roof and chimneys. The Sharp-shin took his turn with the rest in chasing and being chased, the whole game apparently being carried on in the most friendly spirit by all parties. I watched them for over half an hour and left them still at it. (Nash, in MSS.)

At Carberry on September 7, 1883: In the morning I found a considerable assembly of American kestrels (*T. sparverius*) round a small cluster of aspens about a mile north. I several times saw one of them chasing meadow larks, but with no success, apparently. At one time I got into quite a flock of them, twenty-five or thirty at least, and shot three, one fine old one, male, and two young ones both of which had only grasshoppers in their gizzards. All day they were round the house hovering and chattering just like the English kestrel, and sitting on posts and building quite tamely. I ran out of ammunition or could have shot lots, so tame and numerous were they. They must have some migration on hand as I have never before seen them so numerous, though sometimes I have seen single ones around the house. * * * September 8. Kestrels are still about, but not in such large numbers. I shot another nice old male with plenty of grasshoppers and other insects in his gizzard. September 10. Kestrels are still fairly numerous about the premises and one was in the garden catching grasshoppers among the potatoes a good many times during the day. (Christy, in MSS.)

122. Pandion haliaëtus carolinensis. American Osprey, or Fish Hawk.

Rare summer resident; James Falls, Winnipeg River (Hind): Winnipeg: Summer resident; rare; Shoal Lake (Hine). Red River Valley: Summer resident; rare (Hunter). Common, nests along the Churchill and Grass Rivers (Bell 1880). Very rare; one seen over the Assiniboine River at Portage la Prairie, on May 11, 1885 (Nash). Saw it on the lakes behind Porcupine Mountain, and in the Winnepegosis region; saw nest in a tree on a rocky point (Wilkin's) Lake Winnepegosis (Macoun). Shell River: 1885; is a common summer resident and breeds here; first seen April 4; afterwards seen every day (Calcutt). Occasional summer resident at Qu'Appelle (Guernsey). Only observed once or twice (between Norway House and Carleton) (Blakiston).

123. **Asio wilsonianus.** American Long-eared Owl.

Tolerably common summer resident. Winnipeg: Summer resident; tolerably common; arrives April 1, departs November 1 (Hine). Solitary; hunts at night; Red River region (D. Gunn). Has been seen in the wooded country east of Winnipeg, during February (Hunter). "Screech Owl," Ossowa (Wagner). Portage la Prairie: Rare summer resident in this locality; near Winnipeg only five shot in six years (Nash). Carberry: Summer resident; not rare; breeding (Thompson). Two specimens procured at Fort Pelly, September 16, 1881, and one at Birtle, October, 1881 (Macoun).

On July 10, 1884, found a nest of the Long-eared Owl in the middle of a dense bush of low red willows. It was not more than 9 feet from the ground and yet very difficult of access, for the willow branches were too slender to bear my weight, and as they chanced also to be of dead wood they could not be bent down without endangering the nest. Therefore, to make close observations, I lifted a small boy on my shoulders, so that he was able to reach and hand me the contents of the nest.

The nest itself was composed entirely of sticks and was much like that of a hawk. It was not the old nest of a crow, or of any other bird that commonly builds with sticks, so that I am satisfied that it was the owl's own work. At this time it contained four young ones, and these were evidently of four different ages, one being half-grown and nearly fledged; another seemed to be only two or three days old, for it was yet a tiny ball of white down that the elder one might easily have swallowed. The others were in different stages between these. Each of the nestlings as it was handled snapped its bill with vigor proportioned to its size. The mother bird had appeared soon after we arrived, and although it was a bright summer day, she did not seem to be at all inconvenienced by the light, but flew around us with all the assurance of a bird that is usually diurnal.

When we approached the nest she became much excited and either flew round and round us or alighted close over our heads, and snapped her bill loudly and often, while from time to time she uttered a loud long cry like "*on-il-il-il-il-il-il-loo.*"

Having completed my examination I left her in peace, intending to return again in a few days to note the growth of the birds; but some one came before me, and when next I went the nest was empty.

On the night of August 25 I heard a strange shrieking, between the cry of a fox and a cat. It seemed to come from the barn where my Horned Owls were confined. I took my gun and went out. After waiting and watching for some minutes I made out the form of a large broad-winged bird, flying around the building and uttering the wild sound I had noted, in response to the querulous notes of the owls within. When I mimicked its note it flew over me, and was at once

"collected." It proved a Long-eared Owl. The long note that I heard from this owl is decidedly musical, but the cries heard at this time may be best described as unpleasant shrieks.

Amisk-oho or Long-eared Owl of Pennant. This species is found, though not frequently, at Severn Settlement. * * * They inhabit the woods at all seasons, a considerable distance from the sea; seldom to be found within the day, but in the night approach, when a clamorous noise proceeds from tents. They breed in trees, lay four white eggs of an elliptical form in April, and their young fly in the latter end of May. N. B.—This bird is local. (Hutchins MSS., Observations on Hudson Bay, 1782.)

Have never seen them in the winter. They always disappeared at about the time the first snow fell, with the short-eared species. Their flight when hunting during the day always reminded me of the harrier, which it closely resembles. (Nash, in MSS.)

124. Asio accipitrinus. Short-eared Owl. Marsh Owl.

Tolerably common, chiefly in early autumn; probably breeding. Winnipeg: Summer resident; tolerably common; arrives April 1, departs November 1 (Hine). Portage la Prairie: Abundant summer resident; most often seen in the fall, especially about the marshes in August and September; never seen in winter; arrives early in April, departs late in October (Nash). Carberry: Not uncommon in August and September (Thompson). Brandon: April 18, 1882 (Wood). Abundant on Western Plain, 1880; two specimens procured on Assiniboine River below Shell River, September 24, 1881 (Macoun). Trout Lake Station (Murray).

August 18, 1883. During the month we have often seen owls that appear just about dusk and winnow over the prairie to the west of the house; now high and sharp against the last bright streak of day; now down, to remain lost against the dark earth; and if again rising after some time from that same place, we know that pounce brought death and burial to some foraging field-mouse or dissipated small songster. I suspect that this species is either the Long-eared or Short-eared Owl. This evening one of these mouse-hunters came careering about the barns with evident intent to dabble his very soul in arvicoline gore. Mr. Christy's gun was ready and he had one snap shot, but the owl flew off to the northwest over the grain field, but lower we thought as he disappeared. Night and a rainstorm came together and prevented our following.

August 19. A heavy rainstorm all day.

August 20. This morning the rain ceased. About 10 o'clock we went out in the direction of the owl's course. We had almost persuaded ourselves that we saw the bird go down by an old strawstack far out in the field; so on the mere chance we went to this place, and almost immediately up sprang the owl, but at once he was "collected" by the aid of the ready double-barreled, and there he lay on the grass, a beautiful specimen of the Short-eared Owl. His plumage was in perfect order and his horns were remarkably prominent; this, however, was lost

after he had been handled. The curious circumstance of this incident is the owl's persistently remaining during a forty-hours rainstorm on this bare open place while powers of flight were unimpaired, and his only injuries apparently a slight flesh wound on the wing. I have noted several similar instances among hawks and owls.

This specimen was: Length, 14½; weight, 10 ounces; wing surface, 162 square inches, or 16⅛ to each ounce of weight. In its stomach was a single large brown cricket (*Udeopsylla nigra*), no doubt captured on the ground where we found him.

The short-eared owl is a great friend of mine; he turns up regularly every August and September in the marshes and meadows both in Ontario and Manitoba, but I have never seen them in the spring or summer, and as I spend most of my time during the year in their favorite haunts, and never see them nesting or about, am strongly inclined to think they do not breed in the province, nor do they stay during the winter.

On the 18th of April, 1885, at sunset, a large number of these birds came out of the marsh and quartered about over the prairie. One of them, however, after a time rose high in the air and played about over a slough much after the manner of a Night Hawk. I believe it was catching on the wing some of the aquatic beetles that were rising from the water at the time.

Early in the morning of the 25th of April one of these owls circled round my blind for some time, frequently striking its wings together over its back, producing a loud snapping noise. The same bird several times perched on a fence rail near me, this being the only time I ever saw one alight on anything higher than a muskrat house or a log imbedded in the mud. (Nash's MSS.)

125. Syrnium nebulosum. Barred Owl.

Rare and probably migratory. Winnipeg: Summer resident; rare; arrives April 1; departs November 1 (Hine). Red River Valley: Tolerably common in the wooded country east of Winnipeg, where it has also been seen in February (Hunter). Was shown the wings of one shot near Rat Portage in the fall of 1886 (Thompson). Portage la Prairie: Very rare, only one seen near the Assiniboine, but I have occasionally heard them hooting in the woods on the bank of the river in August (Nash).

126. Ulula cinerea. Great Gray Owl.

Rare winter visitant; one in Smithsonian Institution from Red River Settlement (Blakiston). Found along Red River and at Lake Winnipeg as a winter visitant, but not common (Hine). Carberry: One taken September 29, 1884 (Thompson).

On September 29, 1884, received from George Mersham a fine Gray Owl which he had shot in the woods to the south. It was a young male; length 25, extension 54; weight, 26 ounces; wing surface, 480 square inches, *i. e.*, $18\frac{6}{13}$ to each ounce of weight, nearly twice that of the turkey vulture shot yesterday; tail surface 100 square inches. In a remote corner of its spacious stomach I discovered a tiny shrew (*Sorex cooperi?*) and the rest of this capacious receptacle was unoccupied.

127. Nyctala tengmalmi richardsoni. Richardson's Owl.

In the wooded sections probably resident. Winnipeg: Winter visitant; tolerably common; probably resident (Hine). Selkirk Settlement in February and March (D. Gunn). Two Rivers: On February 7, 1885, shot a pair of Richardson's Owls (Criddle).

On June 11, 1883, at the spruce bush I found the remains of a specimen of Richardson's Owl. This was shot in the spring by one of the mill hands and left where it fell.

February, 1885, Toronto: While at Winnipeg last month Mr. Hine showed me several dozen specimens of this bird, all taken near the city within three months.

128. Nyctala acadica. Saw-whet Owl.

Rare, resident. Noted only on Red River: Rare; probably resident; only two seen at Winnipeg up to 1884 (Hine). Red River Valley: Resident (Hunter).

Shipo me shish: Small Owl. This is the smallest owl in Hudson Bay nearly, corresponding to the small owl of Pennant. It weighs 4½ ounces, the length 8½ inches, the breadth 20, irides bright yellow; feet and legs feathered, and talons black. * * * It lives among the pines in all seasons, feeding on mice; only builds a nest of grass half way up a pine tree in the month of May, lays two white eggs, and the young fly in the beginning of July. They are not plenty and are the most solitary bird I ever knew, seldom moving in the daytime, but a brisk mouser by night. They never change color. It is common for the Indian children to steal toward them in the daytime and seize them. (Hutchins MSS., Observations on Hudson Bay, 1782.)

Mr. Hunter claims the Screech Owl (*Megascops asio*) for Manitoba, saying: "I saw a pair at Saboskong Bay, Lake of the Woods, and in 1871 heard them at Point du Chene."

129. Bubo virginianus subarcticus. Western Horned Owl.

Common resident wherever there is timber. This form of *Bubo* is lighter in color than the true *Bubo virginianus subarcticus*. It is probably just intermediate between that form and var. *arcticus*. Pembina: Breeding (Coues). Winnipeg: Common resident throughout the year (Hine). Red River Valley: Permanent resident; more seen in winter (Hunter). Swampy Island: 1885; common resident; breeds near here (Plunkett). Observed breeding (Wagner). Portage la Prairie: Common resident but somewhat migratory (Nash). Carberry: Common resident; breeding; Rat Portage; Duck Mountain; Assissipi (Thompson). Two Rivers, November 12, 1885 (Criddle). Shell River: 1885; winter visitant (Calcutt). Fort Ellise: October, 1880 (Macoun). White Sand River: May 5, 1887; nesting (Christy). Qu'Appelle: Occasional; not common (Guernsey).

September 18, 1884, Portage la Prairie: Mr. A. W. Nash gives me a very interesting note on a pair of Horned Owls that had nested in the woods here, and from the indications observed there seems little

doubt that they subsisted chiefly on fish, which were abundant in a small creek running from a lake through these woods to the Assiniboine River. On examining the gizzards of two ♂ the young of this pair which Mr. Nash shot, he found them full of fish. At one place there were, unquestionably, evidences of an owl having seized a large fish with one foot and held on to the bank with the other. The creek being very small, and surrounded with large bare trees, is a favorite run between the river and the lake for large fish at night, so that all the circumstances are very favorable for the prosecution of the piscatorial pursuits of the owls.

On the 8th of May, 1884, I found a pair of these birds in possession of an old nest in the Big Swamp on the Assiniboine River, south of the Big Plain. This nest was about 30 feet from the ground, in the crotch of a poplar tree, which was as yet without leaves. The nest was formed of sticks and twigs and was indistinguishable from that of a Red-tailed Buzzard. Once or twice I tried to shoot the old bird on the nest, but she was too wary, and evidently had all her wits about her even in the day time. On the 15th of the month I returned to the nest, determined to bring home whatever might be in it. Arriving at the place we found the old birds were absent, so I stood with the gun to watch, while Dr. Gilbert, who accompanied me, climbed the tree. He had not got half way up when the old ones made their appearance, skimming about among the tamaracs and hooting "*who-who-are you.*" As the danger to their brood increased they came nearer and nearer, shouting and stammering with rage "*who who-who-are-you?*" "*What-do-you-do?*" "*Up a tree.*" Then, having learned it seemed, from their close inspection, the magisterial function of the climber they wheeled off, snapping their bills and groaning aloud "*Oh-h-h-h J P up-a-tree!*" And stricken by the hopelessness of their case in this new aspect, they dashed about shouting hoarsely "*Oh-h h,*" "*Go down,*" "*Do go down,*" "*Oh-h-h ——,*" and as one of them recklessly flew close to me, I fired and it fell. This proved to be the female; she measured 53 inches across the wings and in length 25 inches. Her stomach contained part of a partridge. In color she was as light as young females of the Snowy Owl. In the nest were three young owls, two dead partridges (*Bonasa*), and a hare; one of the partridges had in her an egg ready for exclusion, excepting that the shell was as yet pure white without any spots.

The young ones appeared to be about three weeks old. The largest weighed 1 pound 5 ounces, and was about the size of an ordinary pullet. One of them was but half as large as the others. All were clad in white down, with the rudiments of black and white feathers showing in the wings and on the back. Their horns were plainly visible in the form of down tufts.

They resented in the orthodox manner the liberty taken in removing them from the nest, snapping their bills and hissing in a way that

would have distinguished much older birds; but as they did not attempt to use their formidable talons, we did not suffer much inconvenience from their menaces. One of them had been injured, and died before we reached home, the others throve and readily ate from our hands from the first. They solicited food by a short scream very like that of a Night Hawk; they menaced by snapping their bills and hissing, and expressed surprise and anger by a querulous whistle.

By the time they were about two months old they were fully fledged and could fly fairly well. In general color they were pale buff with black bars; a little lighter than the typical *Bubo virginianus*, but considerably darker than the mother. At this time the horns were less conspicuous than when in the down.

They ejected a pellet about five times per week, and if supplied with more food than required for present use they hid it until they were hungry.

At first we (Dr. Gilbert and myself) were in hopes of taming them, but their ferocity grew with their growth, and when they were able to fly, so far from submitting to be handled it was not safe for a stranger to come near them. No better illustration of their strength and fierceness could be given than the fact that, on one occasion, when they were left without food for a longer time than usual, they killed and ate a fine full-grown Swainson's Buzzard, which was confined in the same barn with themselves; and subsequently they did the same with another bird of the same species, which I had always thought strong enough and quick enough to take care of himself.

At the age of 10 weeks a perceptible change in their plumage began to take place; the buffy feathers of the breast gradually giving place to the pure white of the old birds, amounting almost to a transition from the *B. virginianus* form to that of the *B. v. arcticus*.

They continued to grow until they were nearly 6 months old. Their appetites were large and very fastidious, for they would eat half a pound of meat per day each, and would relish only such as was perfectly fresh.

Towards the end of October they seemed to have ceased growing and were contented with smaller rations; their horns were fully developed; they had made their first attempt at hooting, and otherwise manifested their conviction that they now were able-bodied owls on their own account.

In November I was so much from home that they did not get more than 3 meals per week, and it was useless to give them a large quantity of food at a time, as it froze to a stony hardness in a few minutes; therefore, as I could not feed them properly, I thought it better to kill them. When the first was quieted, he proved on examination to be excessively fat, notwithstanding his mouth on short allowance. Under these circumstances sentence on No. 2 was commuted. However, a storm tore open his house; he escaped, but continued about the build-

ings, which were 2 miles from the woods. After a month of this life, during which he received no food from me, I shot and found him, not starving as I expected, but fully as fat as his brother had been.

My ample opportunities of fully observing these interesting birds in captivity as well as in a state of freedom, and indeed all that I have seen of them—their untamable ferocity, which is daily more apparent; their magnificent bearing; their objection to carrion, and strictly carnivorous tastes—would make me rank these winged tigers among the most pronounced and savage of the birds of prey.

Natow okey ornis sen: Horned Owl. This elegant bird harbors in the woods, feeding on mice, wild fowl, and carrion. About the middle of March it builds a nest in a pine tree, with a few sticks laid across, and lays two whitish eggs; the young ones take to the wing in June. (Hutchins MSS., Observations on Hudson Bay, 1782.)

Common resident; but I am satisfied this bird is somewhat migratory, as there is always for sometime in the fall a large increase in their number; at the approach of winter they become less numerous. I noticed this every season. They are almost abundant in October on the Red River, four or five being seen by me nearly every day; after the cold weather set in the great majority of them disappeared.

They vary much in plumage, ranging from very dark to extremely light-colored specimens; two young birds I shot August 9, 1884, being the two palest I have ever seen anywhere. Another bird that was with these two appeared quite dark beside them. (Nash, in MSS.)

129a. Bubo virginianus arcticus. Arctic Horned Owl.

One shot near Duck Mountain in the fall of 1883 (Thompson). Touchwood Hills: October, 1880 (Macoun).

130. Nyctea nyctea. Snowy Owl. White Owl.

Tolerably common winter visitant. Winnipeg: Winter visitor; tolerably common; arrives September 20, departs April 20 (Hine). Merely a winter visitant in the districts to the west of Lake Winnipeg; a few pass the summer near Lake Winnipeg, as occasional birds are seen there in spring and fall (D. Gunn). Ossowa (Wagner). Portage la Prairie: Regular winter visitor, appearing in varying numbers each season (Nash). Carberry: Regular winter resident; Melbourne, Boggy Creek, Big Plain (Thompson). Brandon: February 22, and a female on March 5 (Wood). Qu'Appelle: Have seen specimens, but not common (Guernsey).

Wa-pa-cu-thu, or Spotted Owl. * * * This bird is an inhabitant of the woods; makes a nest in the moss on dry ground. (Hutchins MSS., Observations on Hudson Bay, 1782.)

During the winter of 1882–'83 they were very common. I saw some almost every day; two or three perfectly white ones amongst them. In the winter of 1883–'84 they were less numerous; in the winter 1884–'85 very few were seen; the same in 1885–'86 as in the last three mentioned years; hares were extremely abundant in the north; they probably found sufficient food to maintain them there; arrives in October, departs in February or early in March. (Nash, in MSS.)

131. Surnia ulula caparoch. American Hawk Owl.

An irregular winter visitant. Winnipeg: Winter visitant; arrives in September, departs in April; very abundant in winter of 1884–'85 (Hine). Red River Valley: I am positive that it is a permanent resident and breeds in the wooded country east of the Red River (Hunter). Winter resident; very common at Riding Mountains fall and winter, 1884; not noted at Portage la Prairie (Nash). Carberry: Very abundant in the fall of 1884 (Thompson). Cumberland House, May, 1827 (Richardson). Trout Lake Station and Severn House (Murray).

On October 18, 1884, while shooting in the half open country to the south, I saw a Hawk Owl. Its flight was much like that of a Pigeon Falcon, and it perched after each change of position on the very top of a tree. I winged it at the first shot, and having heard that this species use their beak and claws energetically when wounded, I approached with due caution. It hissed once or twice and endeavored to escape by hopping. After some little handling it attempted to bite, but did not otherwise defend itself. October 28: The Hawk Owl seems to thrive very well in confinement, and during the past ten days I have had no occasion to accuse it of any approach to viciousness. It has often been handled and if hurt thereby simply expresses its annoyance by a chuckling note, much like that of a Whiskey John. When placed on the ground it progresses rapidly by great hops, but the slightest puff of wind is enough to upset it. It sometimes utters a rolling "whill-ill-ill-ill-loo," somewhat like the cries of the Long-eared Owl. It has never sulked, but from the first has been ready to apply itself to the demolition of the small birds and mice with which it has been supplied.

On November 7, while at the poplar bush, I saw several Hawk Owls and secured one alive. This one is as different as possible in temper from the first I had. It snaps with its bill and strikes with its claws at any person or animal that approaches it. It refused all food and continued sulking till it died.

This fall has been remarkable for a migration of Hawk Owls. During the autumns of 1882 and 1883 I saw not one about here, but this year I have seen above fifty. Its favorite localities appear to be the half-open woods and park lands, and it is usually seen perched on the top of the bushes and trees. In passing from one tree to another, it commonly throws itself headlong downwards nearly to the ground, along which it skims towards the next tree, and on nearing its goal rises with a graceful aërial bound to the topmost perch offered.

Somewhat irregularly distributed throughout the province. Near Portage la Prairie I never saw it, but in December, 1884, I met with it in gradually increasing numbers from Gladstone to the Riding Mountains, where it was very common. They are quite diurnal in their habits. Two that I shot had nothing in their stomachs. Its flight, particularly through the low bushes and scrub, closely resembles that of the Sharp-shinned Hawk; it skims along noiselessly close to the ground, frequently alighting on the top of a bush, from whence it will dart on a mouse or other prey. It also frequently rises high in the air and hovers over the ground, remaining sta-

tionary over one place for some time, exactly like a kestrel or our own Sparrow Hawk.

On November 26, 1886, I saw one on the banks of the Red River. (Nash, in MSS.)

132. Coccyzus erythrophthalmus. Black-billed Cuckoo.

A tolerably common summer resident in woodlands. Breeding in Pembina Mountain (Coues). Red River Settlement (Brewer). Winnipeg: Summer resident; tolerably common (Hine). Oak Point: 1884, arrived June 1 (Small). Portage la Prairie: Tolerably common summer resident; arrives about June 1, departs in August; not observed on the Red River near Winnipeg; in 1884, first seen May 31 (Nash). Carberry: Tolerably common summer resident; noted near Shoal Lake, west, and eastward toward Rapid City (Thompson). August 29, south slope of Riding Mountain, American Cuckoo observed (Hind, 1858). Shell River; 1885, first seen, two, on June 16; is common all summer and breeds here (Calcutt). One shot on Moore Mountain July 3, 1880 (Macoun). Qu'appelle (Guernsey).

On July 29, 1882, at Carberry, while out in the woods to the east, I heard the sonorous and to my ear pleasing "*kow-kow-kow*" of the Rain Crow or Black-billed Cuckoo, the first I have heard in the country. This specimen measured: Length 11½, extension 15½; its stomach was filled with vegetable matter and the remains of insects.

On August 13, at Carberry, shot a cuckoo (*erythrophthalmus*) in the afternoon; male; length 11, extension 15; stomach was crammed with caterpillars and grasshoppers; its inner coat seemed to be very slightly covered with minute hairs. Several of the species were seen.

On June 23, 1884, near Shoal Lake, returning with A. S. T. from Duck Mountain, for the first time noted the cuckoo. The sonorous "*kow-kow-kow*" came again and again from a little grove of poplars on the prairie. I went towards it and presently heard it behind me, and after a little more searching I discovered the bird on a branch about 5 feet from the ground and 10 from where I stood; it was sitting perfectly motionless, watching me closely, and deliberately uttering the characteristic *kow-kows*, varied with other sounds of the same nature.

These notes have often been described as hard and disagreeable, but to my ear they are not unmusical and are full of associations with forest life and odors that make them pleasing to my mind.

(On the succeeding days of June, I found this species quite abundant in the groves on the prairies between Shoal Lake, west, and Carberry.)

133. Ceryle alcyon. Belted Kingfisher.

Common summer resident along all fish-frequented streams and lakes; of general distribution; Pembina and Mouse River (Coues). Pembina, May 1 (Blakiston). Dufferin: Arrived between April 25 and 30 (Dawson). Winnipeg: Summer resident; tolerably common (Hine). Swampy Island: 1885, first seen, one, on May 18; next seen May 19,

after which it became tolerably common; breeds here; in fall was last seen on September 24; 1886, first seen, one, on April 29; bulk arrived May 15; last seen May 22; is rare here (Plunkett). Specimen in Smithsonian Institution from between Hudson's Bay and Lake Winnipeg, also from Red River Settlement, Pembina, May 1, (Blakiston). Lake Winnipeg (Bell). Shoal Lake, May 15, 1887 (Christy). Portage la Prairie: Common summer resident about the streams and lakes; arrives early in May; commences nesting about the 15th of the month; departs in October; in 1884, first seen May 5 (Nash). Very abundant on Red Deer, Swan, Assiniboine, and all rivers along route of 1881 (Macoun). Carberry: Summer resident; more seen in springtime (Thompson). Dalton: 1889, first seen, one, on April 29; moving unsettled; rare here and not breeding (Youmens). Shell River: 1885, first seen, one, on May 1; next seen, one, on May 3; a transient visitant; not breeding (Calcutt). Qu'Appelle: Tolerably common summer resident; breeds; arrives May 30 (Guernsey).

I have never seen this species in the vicinity of any of the drainage lakes, although they abound with amblystomæ, insects, etc., to the exclusion, however, of fish.

134. Dryobates villosus leucomelas. Northern Hairy Woodpecker.

Common resident of the woodlands. In heavy timber on Turtle Mountain (Coues). Winnepeg: Rare; breeding (Hine). Portage la Prairie: Tolerably common resident (Nash). Touchwood Hills and Lake Manitoba, and northward, 1880; in the woods along the Red Deer and Swan Rivers, 1881 (Macoun). Carberry: Common; breeding; probably resident, but not observed by me in the very coldest weather. Rat Portage: Tolerably common (Thompson). Qu'Appelle: Tolerably common; permanent resident (Guernsey).

On June 11, 1883, while in the spruce bush, I heard a curious chirping sound that scarcely ever seemed to cease. I traced it to a tall poplar tree, in whose trunk there was a hole about 30 feet from the ground. Having procured an ax I soon had the tree down, and found myself in possession of a nest of young Hairy Woodpeckers. They were in a hole, evidently the work of the parent birds, about a foot deep, 3 inches wide inside and 2 at the entrance. The four youngsters were nearly grown and fledged, and consequently were much crowded in this narrow chamber. Three of them were precisely like the mother-bird in color and the fourth differed only in having over each ear a cockade of rich yellow. I took them home with me and found that they had enormous appetites, nearly unlimited capacity, and tremendous lung power. The whole day long, when not eating, they kept up a deafening *chirr-chirr-chirr*, and two of them, including the yellow-topped one, never ceased, except in absolute darkness. Even while morsels of food were passing down their greedy throats they would continue to gurgle out a sufficiency of interrupted *chirr-chirrs* to save the principle. I found that at one meal

each of these birds could take 2 feet of the entrails of a duck. I did not find it convenient to feed them more frequently than three times a day, and each meal-time found them ravenous, so that probably the parents provided them with much more food in the aggregate than I did, and as all they brought them would probably be maggots and insects, caught singly, we may form some idea of the enormous labor entailed by the rearing of a young brood. These young birds have at each corner of their mouths the usual boss or rounded mass of yellowish white tissue. I have never been able to decide on the use of this. I had supposed that it is intended to widen the gape, as it is largest in the newly-hatched bird, but is gradually absorbed as they grow. Experiments, however, with these young woodpeckers led me to believe that the nerves of taste, or at least of touch, are located there, for these birds never would open their beaks to receive the food they were clamoring for at first when I touched them on the beak or breast, but the moment this soft lump was touched they were wide agape.

The usual note of this rather noisy bird is a loud *chuck*, but it has also a harsh, prolonged, rattling cry, somewhat of the nature of the kingfisher's rattle, but varied and lengthened with a combination of stridulous screams.

135. Dryobates pubescens. Downy Woodpecker.

Tolerably common in wooded sections; said to be resident. Winnipeg: Resident; abundant; breeding (Hine). Shoal Lake, May 15, 1887 (Christy). Ossowa (Wagner). Portage la Prairie: Tolerably common resident (Nash). Lake Manitoba and westward; specimen shot at Manitoba House, June 16, 1881 (Macoun). Carberry: Uncommon; probably resident (Thompson).

136. Picoides arcticus. Arctic Three-toed Woodpecker.

Common resident in the woods, especially among spruce. Specimens procured near Red River Settlement by D. Gunn in Smithsonian Institution collection (Blakiston). Very abundant about Rat Portage in October, 1886; also in all the spruce woods near Carberry; it is there more numerous in winter than in summer, therefore it may be partly migratory (Thompson). Specimens shot at the confluence of Red Deer River and the Etimoines River (Macoun).

On November 4, 1884, while out deer-hunting, I was guided by the tapping and "churking" of a Three-toed Woodpecker to the place where he was busy foraging on the trunk of a spruce tree, and although I scored a clean miss the bird fell dead at my feet without a sign of violence about it. It was a female and the stomach contents, as identified by Dr. Brodie, are as follows: Eight larvæ of a *Buprestis* (a spruce borer); five larvæ of another species of *Buprestis*, five larvæ of a *Saperda* (a pine borer); one larva of a *Lepidopter*, probably a moth; one larva not distinguishable, and a small quantity of wood.

137. Picoides americanus. American Three-toed Woodpecker.

Very rare, but probably general in the north and east. Winnipeg: very rare (Hine). I have taken this bird on the Brokenhead River, also on the Winnipeg (R. H. Hunter). Rat Portage, October 21, 1886, saw what I took for *Picoides americanus* (Thompson). This bird exists in all the forests of spruce-fir lying between Lake Superior and the Arctic Sea, and it is the most common woodpecker north of Great Slave Lake (Richardson). Severn House (one specimen), the common Three-toed Woodpecker (Murray). Hudson's Bay (Hutchins).

138. Sphyrapicus varius. Yellow-bellied Sapsucker.

Common summer resident of wooded section; plentiful at Pembina, where it was breeding in June; again seen on the Mouse River; not observed further north (Coues). Winnipeg: Summer resident; abundant (Hine). Shoal Lake: May 20, 1887 (Christy): Abundant around Lake Manitoba and westward; specimen shot at Manitoba House, and Swan Lake House, June and July, 1881 (Macoun). Carberry: Common summer resident; breeding (Thompson). Shell River: 1885, first seen a pair on May 3; a transient visitor; not breeding (Calcutt).

On June 20, 1883, at the spruce bush, I found the nest of a Sapsucker. It was in a new hole in a green poplar tree, about 30 feet from the ground. It contained five newly hatched young, and in the chamber with them were some of the shells, out of which I reconstructed two eggs. The male, length $8\frac{1}{8}$, stomach full of ants, the female, length $8\frac{3}{8}$, stomach full of ants, her bill also, was full of black ants, intended probably as food for the young ones, excessively fat, no red feathers at all except three or four scattered on the front of the crown, which was black. The eggs were each $\frac{13}{16}$ by $\frac{5}{8}$ and pure white.

On July 3, in spruce bush, with M. C. found the nest of a Sapsucker. It was about 20 feet from the ground in a poplar, and facing the southeast. Just over the hole was a large limb, which would doubtless be of some service as a shelter from the rain. I shot the female; her crown was black, with but a very few red feathers in the front, and some of these were tipped with yellow. The gizzard was full of wood ants (*Formica rufa*).

139. Ceophlœus pileatus. Pileated Woodpecker. Cock of the woods.

Rare; resident in heavy timber. Winnipeg: Summer resident; tolerably common at Lake Winnipeg and Lake of the Woods (Hine). Selkirk (Gunn). Swampy Islands: Tolerably common resident; breeds here (Plunkett). Nelson River (Brewer). Very rare summer resident; saw one that had been shot in the woods near the White Mudd River at Westbourne in 1887 (Nash). The species was seen on Swan River, September 2, 1881 (Macoun). Common in the woods between Winni-

peg and Rat Portage, also about Lake Winnipeg in the spruce woods (Dr. Arthur S. Thompson). Mr. Hine showed me a specimen taken at Prince Albert; two seen at Rat Portage (Thompson).

On October 16, at Rat Portage, a Pileated Woodpecker was shot by W. S. Thompson; male; length 18½, extent 29; stomach full of ants. In the afternoon saw another in an elevated piece of burnt woods.

There is another species of Woodpeckers, the size of a migratory pigeon, with a blooming crimson crown. They inhabit the interior part of Hudson's Bay. The skins of their head are used by the trading natives to ornament their calimats. Also describes a specimen. It was shot in January at Gloucester House in latitude 50° 31′ N., longitude 96° 3′ W., and 387 miles up Albany River. Makes a nest in the holes of trees; lays six eggs and brings forth its young in June. (Hutchins MSS. Observation on Hudson Bay, 1782.)

140. Melanerpes erythrocephalus. Red-headed Woodpecker.

Rare summer resident; common at Pembina (Coues). Winnipeg: Summer resident; tolerably common; one or two pair seen each season (Hine). Very rare summer visitor; May 31, 1885, saw one bird near the town (Portage la Prairie) and a day or two afterwards saw the same bird or another near the same spot (Nash). Carberry: Rare; summer resident (Thompson).

Red-headed Woodpecker. * * * This bird is uncommon in these parts (Albany), as I conclude from the ignorance of the natives in general concerning it. Perhaps this is the farthest part of its migration. (Hutchins MSS., Observations on Hudson Bay, 1782.)

141. Colaptes auratus. Flicker. Highholder. Golden-winged Woodpecker.

Very abundant; summer resident wherever there is timber; common along Red and Mouse Rivers; also observed at Pembina and Turtle Mountains (Coues). Dufferin: Arrived between April 15 and 20 (Dawson). In a Selkirk Settlement specimen the belly is tinged with pale sulphur yellow, the back with olivaceous green (Ridgway). Winnipeg: Summer resident; abundant (Hine). Nelson River: In immense numbers at Red River Settlement, April 26, 1859 (Blakiston). Ossowa: Breeding (Wagner). Oak Point: 1885, first seen, one, on April 21; next seen on 22d; is common and breeds here (Small). Portage la Prairie: Abundant; summer resident; arrives about April 20; departs early in October (Nash). Common throughout the Winnepegoses region and along the Assiniboine wherever there were trees; Red Deer Lake, August 20 (Macoun). Carberry: Abundant; summer resident; breeding; Rat Portage (Thompson). Dalton: 1889, first seen, one, on April 12; next seen, April 13; became common on April 15; breeds here (Youmans). Shell River: 1885, first seen, two, on April 27; afterwards seen every day; is common all summer, and breeds here (Calcutt). Qu'Appelle: Common; summer resident; arrives April 25 (Guernsey). Trout Lake: One of the woodpeckers, but, as it feeds on ants and therefore does not require so much labor to get

its food as the other woodpeckers, its bill is less suited for such work; it is only a summer visitant to the far countries (Murray).

On May 31, 1883, found a Flicker's nest in oak stub, only 8 feet high; the hole was 18 inches deep, but the wood was quite rotten, and I had no difficulty in reaching the eggs.

October 27, 1882, while examining an old stump in the woods to the north of Carberry, I met with an excellent illustration of the aptitude of the Spanish name for the woodpecker, "Il Carpentero," as applied to our Flicker. I mean in the sense of its being a worker in wood and house provider for others. The history of the case was briefly this, as far as the circumstantial evidence revealed it: First came the hard-working Flicker and excavated the hole, perhaps while yet the stump was sound, and in the years that followed we know not how many young Flickers cracked their glass-like shells in this narrow chamber; and after the Flickers came no more it was taken by some bird, a grakle perhaps, that, like the "foolish man," founded its nest on mud, finishing its superstructure with sticks and straw. Then, it seems, came a new possessor, who built a strong, shapely nest of moss and mud; but for the situation it might have been the work of a robin. Lastly, this many-storied tenement house became the eyrie of a sparrowhawk, whose household furniture of straw and moss reached halfway up to the doorway. A strange tale of a hole, surely; but there was more yet to be learned from the old stub, and, allowing fullest weight to circumstantial evidence and accepting the supposititious as a fact, I may be allowed to relate as a matter of established history that on a certain day Sir *Falco sparverius* brought home to his brood a tiny shrew, of the species yclept by scientists the *Sorex cooperi*. Now, it chanced that the young hopefuls of the robber baron were not just then very hungry—oh! marvelous chance—so that the *Sorex cooperi*, being left to his own devices, set about to escape, and so far succeeded that he burrowed down through the home effects of the Kestrel and the moss-builder, but when so far the hard mud floor barred further progress, and the poor little captive, weary and wounded, soon died in the buried nest; and there I found him, like Ginevra in the oaken chest, when long afterwards I broke open the rotten timber and made it disclose a tragic tale that, may be, never happened at all.

In this region (Carberry) the flicker seems to prey principally on ants, taking them sometimes from the rotten stumps that are honeycombed with their galleries, but more often, I believe, from the mound-like ant-hills which are to be seen on the prairie in such numbers. His method of attack seems to be by first pecking a hole in the center of the hill, and then as the ants come swarming out he dispatches them till his appetite is satisfied. Afterwards he comes again and again to the hill till it is completely depopulated.

On the 27th July, 1884, I saw one of these birds dusting on a sandy spot near the Assiniboine River. He performed the operation as skillfully as a quail and was evidently used to it.

In cold, stormy weather they roost on the ground amongst the long grass at the root of a stump or tree. On the 29th September I put several out of such places just at dark. They were very loth to leave, my dog almost jumping on them before they would get out. (Nash, in MSS.)

142. Antrostomus vociferus. Whip-poor-will.

Common summer resident in woods and bluffs. In numbers at Pembina (Coues). Pembina (Lay). Dufferin: Arrived May 8, 1874 (Dawson). Winnipeg: Summer resident; abundant (Hine). Its voice is known at Red River Settlement (Blakiston). Ossowa: Breeding (Wagner). Oak Point: 1884; first heard May 8; next heard May 12; heard again on 13; is common and breeds here (Small). Portage la Prairie: Common summer resident; arrives about May 20; departs early in September; found young partially fledged as late as July 29 (Nash). Abundant in the north; Manitoba House, June 17, 1881; Grand Valley (Macoun). Carberry: Common summer resident; breeding; Long River (Thompson). Two Rivers: 1885, first heard, one, May 21; next, May 24; fairly rare (Criddle). Brandon: May 25, 1887 (Wood). Shell River: 1885, first heard, one, May 20; common all summer; remains until August (Calcutt). Qu'Appelle: Occasional (Guernsey).

On May 17, 1882, at Long River Gorge, a partly wooded country, the best we have seen yet, heard a number of whip-poor-wills chanting their familiar strain towards night. This is the first notice of their arrival. June 6, went late in the evening to the eastern slough to observe the two nightjars. Both of these, as well as the mosquitoes, were in full force. But as the shades of night closed in the night-hawks that hitherto had been chiefly noticeable became less noisy, and their cousins, the whip-poor-wills, became the principal performers in the full concert. How many there were it would be hard to say, but certainly not less than a dozen appeared to be in the near neighborhood, and the chorus of voices loudly reiterating "whip-poor will" was always a full one of at least three voices. As I lay in the grass and listened to these various voices of the night I attempted a clumsy imitation of the notes "whip-poor-will," and was pleased to see one of these birds come flying around me closer and closer until at length it hovered but 18 inches from my face in the grass. For a moment or two he poised and inspected me; then flying away he returned immediately with another, his mate probably, and the pair skimmed about me once or twice; then the wing motion, which I could barely discern in the gloom, ceased in the vicinity of a certain stump close at hand. At once I concluded that the bird had alighted, and then the calmness of the night was shocked by the usual tragedy.

The refrain is almost too well known to need description. It consists of three, or sometimes four, notes, "whip-poor-will," or "ah-whip-poor-will." The "ah" is very faint at best; the "whip" and "poor" are rich and smooth, but with an accent on the former: the "will," uttered

with a rattle, great force, and emphasis, seems at half the distance from you and not quite the same direction as the first notes.

On June 27, 1883, in the dry open woods to the south, I found the nest of the whip-poor-will. The two young ones were covered with yellow down, which made them very conspicuous on the dark leaves. They were close to the base of a very large poplar and only 20 feet from an oven bird's nest. No attempt at nest building was observable.

The whip-poor-will (*Antrostomus vociferus*) differs from its near relative, the night-hawk, in several particulars. It seldom leaves the woods and comes out onto the open prairie; and even among the trees it is seldom or never seen sailing about high overhead during daylight. It is also a much shyer bird; and, although its highly remarkable far-sounding voice may often be heard, it needs great caution to get within a sufficiently short distance to see the performer. (Christy.)

143. Chordeiles virginianus sennetti. Night-hawk.

Very abundant summer resident. The type of this variety was taken by the describer, Dr. Coues, on the boundary 50 miles west of Pembina. I therefore assume this to be our only form. Pembina and westward along the boundary to the Rockies (Coues). Winnipeg: Summer resident; abundant (Hine). Ossowa: Breeding (Wagner). Oak Point: 1884, arrived May 25; 1885, first seen, one, on May 19; next seen on May 23; is common and breeds here (Small). Portage la Prairie: Abundant summer resident; arrives about May 20, departs about September 15; in 1884, first seen May 27 (Nash). Abundant in the Northwest; specimen shot at Manitoba House, June 16, 1881 (Macoun). Carberry: Abundant summer resident; breeding (Thompson). Dalton: First seen, one, on May 27 (Youmans). Two Rivers: 1885, first seen, several, May 23; next seen, May 25; became common on and after May 27; breeds here (Criddle). Shell River: 1885, first seen, one, on May 23; next seen, ten, on May 24; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 21 (Guernsey).

On August 1, 1883, while in the eastern sand hills with Miller Christy, we found the two young of a Night-hawk sitting on the bare ground in the open. They seemed about 3 days old. On the tips of their beaks were still the hard white points with which they are furnished to aid them in chipping the shell. The old shells were lying around the nest, as is the case with the *Præcoces*, and but for these I should have passed by the young ones, as they had squatted close to the ground and shut their eyes, for the blackness and brilliancy of these would almost certainly have betrayed them. I gently touched one of them, whereupon it crouched down more closely to the ground; but its companion, rising up, hissed with open beak and snapped savagely at my fingers. On being further teased they ran off, exactly in the manner of young ducks, with outstretched wings and with neck and body at an angle of 45 degrees. After running a few feet they stopped, squatted as before,

and closed their eyes. This they repeated several times, but at best they only made little progress, and each time on being overtaken the bold one was always ready to fight. This proved to be a male; the sex of the other was not ascertained, but probably it was a female. At this age the middle claw is not pectinated.

In the light of these observations it seems likely that in some of the cases in which the Night-hawks are supposed to have carried off their young, the latter had really run from danger, or were led away by the parent birds. It is pretty well established that these will remove their eggs from a dangerous locality, carrying them in their mouth, but it is difficult to understand how they could so transport their young.

On May 29, 1884, watched a Night-hawk booming a number of times in broad daylight; each time, just as the boom began, the wings were brought forward, so that the two together formed a half moon, with the points downwards, and as well as I could discern, the tips of the wings vibrated out of sight while the sound continued.

The courting and mating ceremonies, apart from the booming, are carried out chiefly on the ground, where the male may be seen chasing his mate about and around the logs and bushes. When thus engaged they do not hop, but always run, as far as I have been able to observe.

As already intimated, the eggs, which, to the best of my knowledge, never exceed two in number, are laid on the bare ground; they are peculiar in being of the same shape at each end, both in fact being big ends. When sitting on them the old bird will close her lustrous black eyes and remain perfectly still until nearly trodden on; then, finding herself discovered, she will flutter off and attempt, by the usual shamming of lameness, to lead the intruder away from her treasure. According to Audubon, these birds will remove their eggs when much molested. My own experience shows that they will desert the eggs, but I have never known them to be removed by the birds themselves.

The old theory of the Night-hawk's booming was that the sound was caused by the air rushing past the wide, gaping throat; but the present idea seems to be that it is made by the wings. In support of the latter I would adduce the following reasons: First, the sound bears evident resemblance to the drumming of the partridge and of the snipe; second, it may be *accurately* imitated by throwing a large nail sideways through the air; and last, the following observation on the crow, a not very wide-mouthed bird, points, I think, to a wrong origin for the sound.

Toronto, May 14, 1885: While watching a crow being chased by another, I noticed the foremost one dive suddenly downwards and then up again; the pursuing bird followed even more quickly, and as it swooped upwards it produced at the turn *a boom* similar to that of the Night-hawk, but duller and in a lower key, as might have been expected from the larger feathers and slower flight of the crow.

The Night-hawk subsists chiefly on insects, which it devours on the wing; but Wilson examined some whose gizzards were full of crickets, a prey that must have been taken from the ground. On several occasions I have found the stomach full of grasshoppers, and in one I found a number of pebbles. As soon as the young are strong on the wing the species is seen in flocks and begins to depart, for it is one of the earliest to move of the fall migrants. These flocks are very long and straggling, though few in numbers; the largest I ever noted contained forty-one of the birds. (Carberry.)

The eggs of the Night-hawk (*Chordeiles virginianus*) were several times found on the bare ground among the sand hills [on the north side of the Souris, near Plum Creek], with no approach to a nest for the helpless young. The parent birds endeavored to draw us away from their eggs, fluttered as if wounded a short distance from them, and uttering cries of distress. (Hind, July 1, 1858.)

Among the trees on the sand hills and in the bluffs the Night-hawk (*Chordeiles popetue*) is abundant and makes itself very conspicuous towards evening by its loud scream, by booming, and by displaying during flight the unmistakable white patch on each wing. Not unfrequently it may be seen on the wing at midday; and it always makes an appearance long before sunset, sailing about at a great height and screaming frequently. After flying a while over the head of any intruder it suddenly spreads its wings, and, giving a wide swoop downwards, emits a loud booming noise, which has gained for it in some parts of America the name of "Bull Bat." That this noise is made over one's head in order to threaten or intimidate seems to me pretty certain; but I have also, I believe, heard it emitted at a distance, without any such object.

The number of old birds began to get very much less by the end of August, but a few were nevertheless seen until well on into September—one as late as the 11th. After the migration commenced they were not unfrequently seen in the evenings flying over in large straggling parties, circling about as they proceeded. These parties usually traveled southwest, I believe, though this is not the direction usually chosen by the other birds of the district when moving south. (Christy.)

Early in June, 1882, I witnessed the courtship of a pair of these birds. It was a very pretty sight. The spot selected for their meeting was a small bare patch of ground in the edge of the scrub, evidently where an old camp fire had been made. About this the male strutted, posturing most gracefully before his mistress, reminding one somewhat of the antics of a male tame pigeon when similarly engaged. (Nash, in MSS.)

144. Chætura pelagica. Chimney Swift.

Tolerably common summer resident. Common at Pembina, and thence westward to Mouse River (Coues). Pembina (Lay). Winnipeg: Summer resident; abundant (Hine). Portage la Prairie: Common summer resident; arrives about May 16, departs early in September; in 1884 first seen, May 17 (Nash). A few observed at Swan Lake House, July 8, 1881 (Macoun). Carberry: Rare and not breeding (Thompson). Brandon: April 21, 1887 (Wood).

A nest examined by me at Winnipeg, July 15, 1883, contained four eggs. The young were hatched a few days after. From that time the young remained in and around their nest until September 4, when they flew for the first time, and at once disappeared. After the young grew too large for the nest they arranged themselves in a row, touching one another, but slightly below each other, and clung to the wall. In that position they remained until they took their final departure. (Nash, in MSS.)

145. Trochilus colubris. Ruby-throated Humming Bird.

Tolerably common summer resident of sheltered gardens. Quite common at Pembina; not seen west of this point (Coues). Dufferin: Arrived May 17, 1874 (Dawson). Known about the gardens of Red River Settlement (Blakiston). Winnipeg: Summer resident; tolerably common as far north as Big Island Lake, Manitoba (Hine). Oak Point: 1884; arrived May 25 (Small). Portage la Prairie: Common summer resident; arrives about June 3; also near Winnipeg (Nash). Specimens seen on Red Deer River, at the head of Lake Winnepegosis, August 16, 1881 (Macoun). Not observed on the Big Plain (Thompson). August 29, south slope of Riding Mountain, humming birds were observed; Bad Woods; "First humming bird was noticed here" (Hind, 1858). Shell River: 1885; first seen June 3 (Calcutt). Qu'Appelle: Occasional; not plentiful (Guernsey). Norquay: 1884 (Christy).

146. Milvulus forficatus. Scissor-tailed Flycatcher.

Accidental visitant. Winnipeg: Accidental (Hine). Portage la Prairie: One found by Mr. C. W. Nash, 2d October, 1884.

The Swallow-tailed Flycatcher (*Milvulus forficatus*) is such a characteristically southern bird that its accidental occurrence in Manitoba is worthy of note. Last January I was shown a splendid specimen taken at Portage la Prairie by Mr. Nash. He found it lying dead on the prairie on the 20th October of 1884. Its stomach was empty, and the bird was very emaciated, although in fine plumage. On the previous night there was a sharp frost. In addition to this record, I quote the following rather startling statement from the Report on the Hudson Bay, by Professor Bell, of the Canadian Geological Survey, 1882:

> But the most singular discovery in regard to geographical distribution is the finding of the Scissors-tail, or Swallow-tail, Flycatcher (*Milvulus forficatus* Sw.) at York Factory. * * * The specimen in the Government Museum was shot at York Factory in the summer of 1880, and I have learned since that these remarkable birds were occasionally seen at the posts of the Hudson's Bay Company, all the way west to the valley of the Mackenzie River.—E. E. T.

147. Tyrannus tyrannus. Kingbird.

Very abundant summer resident wherever there are any trees; extremely numerous at Pembina; breeding; abundant along the line westward to the Rockies (Coues). Winnipeg: Summer resident; abundant (Hine). Big Ridge: Most common of all was the tyrant flycatcher (*Muscicapa tyrannus*) which endeavored to hold undisputed sway over the bluff he had selected as his home (Hind). Ossowa: Breeding (Wagner). Oak Point: 1884, arrived June 3; 1885, first seen, one, on May 21; next seen, one, on May 22; is common and breeds here (Small). Portage la Prairie: Very common; summer resident; arrives about May 17; departs the first week in September; in 1884, first seen, May 17 (Nash). Very common throughout the Winnepegosis region examined in 1881;

chiefly on borders of prairies or openings (Macoun). Carberry: Abundant summer resident; breeding; Duck Mountain (Thompson). Two Rivers: 1885, first seen, one, on May 21; next seen, May 23, when it became common; is common here (Criddle). Dalton: 1889, first seen, one, on May 24; next seen on May 25; breeds here (Youmans). Shell River: 1885, first seen, one, on May 21; next seen, five, on May 24; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 24 (Guernsey).

On June 21, 1882, down by the slough in a low bush, found a Kingbird's nest. It was just completed and contained no eggs yet. The king and his wife made more fuss over my intrusion than most birds would have done had the nest been full of young ones.

Further on I found another nest of this species. It was placed on the top of a stub, about 8 feet high. The bird flew off. The nest was made of roots and fine fibers, and contained four eggs. One of them measured $1\frac{1}{8}$ by $\frac{5}{8}$; it was creamy white, with a few clear spots of brown and lavender, inclined to form a wreath about the large end; the others were similar; all were quite fresh.

On August 20, 1883, shot a young Kingbird; male; 6.8½; extent, 14; stomach full of insects; no crown patch of bright color. The species may now be seen far out on the open prairie, a mile or two from timber, catching insects on the wing or on the ground, availing itself of the tallest weeds as perches, or failing these it settles on the prairie. I believe it never runs when on the ground, but takes wing each time it changes its location. It is common to see the species in small parties of four or five; these are doubtless the family of the season. They continue together under the guidance of the old ones till they migrate. This took place last year about the first week in September.

On June 17, 1884, at Duck Mountains, heard the blackbirds screaming in the distance, while above their noise was heard the shrill twitter of the Kingbird. These grackles had ventured too near the king's home and he was showing them their mistake.

July 24, while climbing to a hawk's nest, the old birds came flying about my head uttering their piercing whistles; these attracted the attention and roused the indignation of a Kingbird, who immediately gave chase and soon had the satisfaction of knowing that he was making himself consummately obnoxious to the hawks, for they could not keep him off and they would not fly away, so that he worked his tyrannical little will on them much as he pleased. As well as I could make out he took several rides of over a hundred yards on one of the hawks, and no doubt when perched on its back he was not idle.

It has been questioned whether the Kingbird really exerts physical violence with beak, etc., in the aërial combats for which it is noted, the counter proposition being that the predaceous birds have a dislike of a scene and know that an uproar is fatal to their designs, and therefore they beat a retreat as soon as their vituperative little adversary appears.

I am inclined to think that while there is much truth in the latter view the former is not wrong, as the above goes to show, and the aërial activity of the flycatcher saves him from any attempt the hawks may make to summarily end the persecution.

The Kingbird has a peculiar method of expressing his devotion to his mate. On the warm spring evenings he may be seen leaving his post by her side, in some low tree, and launching out he rises to a height of 30 or 40 feet in the air and gives vent to a tremendous sustained volley of screams and twitters, during which he continues to dart backward and forward in a frantic sort of a way, making a very demonstrative but harmless charge at any passing bird, and illustrating several fanciful methods of flight until, having relieved his feelings and covered himself with glory, he swoops down into the bush to receive the applause of the only spectator he seeks to please. The food of this bird consists chiefly of coleopterous insects, but I have occasionally found seeds in its gizzard. In the pursuit of its ordinary prey it may often be seen far out in the prairie, miles from any trees. Under these circumstances it avails itself of the tall weeds as perches, or, failing these, settles on the ground. The young continue with the parents until all move southward.

The well known Kingbird or Tyrant Fly-catcher (*Tyrannus carolinensis*) is abundant in Manitoba. A more fearless, inquisitive, pugnacious, and warlike bird it is difficult to imagine. Often when I have shot a bird as a specimen, up has flown a Kingbird with a manner which gave him the appearance of saying, "Now, what's going on here?" To see a Kingbird dash at and attack a huge harrier, for no other purpose whatsoever than to have a fight, is a thing of common occurrence, and the harrier always tries to avoid and escape from his assailant. The Kingbird breeds in the low scrubby oak trees which cover the sand hills, building, like the shrike, a nest consisting largely of the stalks of a species of *Gnaphalium*. After the young are able to fly they often live round the settlers' houses on the open prairie, but about the end of August they all leave. (Christy.)

During August I frequently saw these birds drop onto the surface of the water of the Red River and remain there floating down with the current for some minutes at a time. Occasionally they would, whilst there, work their wings as other birds do when bathing, and so wash themselves. (Nash, in MSS.)

148. Myiarchus crinitus. Crested Flycatcher.

Very rare; summer resident of thick woods. Winnipeg: Summer resident; tolerably common; a few taken (Hine). Lake Manitoba: June 17, 1881 (Macoun). I frequently heard the sonorous croak of this bird in the Carberry spruce bush, but never satisfactorily established its presence there until the summer of 1886, when my brother, Dr. Arthur S. Thompson, sent me a male specimen, killed there on June 6 (Thompson). Portage la Prairie: Rare summer resident; one pair bred in the woods near the Assiniboine River each year (Nash).

149. Sayornis phœbe. Phœbe. Pewee.

Rare summer resident; one or two pairs seen each season; usually nests under bridges. Winnipeg: Summer resident (Hine). Oak Point: 1884, arrived May 15; scarce; 1885, first seen, two, on May 22; next seen, one, on May 24; is common and breeds here (Small). Qu'Appelle: Tolerably common; summer resident; arrives May 20 (Guernsey). Portage la Prairie: On the 11th of May, 1885, I believe I heard one of these birds calling on the south side of the Assiniboine River, but as I was on the north side and the river was bank full I could not cross to make sure of him (Nash).

150. Contopus borealis. Olive-sided Flycatcher.

Common; summer resident of woodlands. Winnipeg: Summer resident; tolerably common (Hine). Rare; three specimens seen on Red Deer River and Pembina Mountains; also Waterhen River; evidently breeding (Macoun). Carberry: Tolerably common; summer resident; Duck Mountain, common; Portage la Prairie, occurs (Thompson).

On July 26, 1883, in the tamarac swamp beyond the spruce bush I noticed a very noisy flycatcher; its note was loud, and its habits were much like those of the Great Crested Flycatcher. After some trouble, for it was very shy and kept chiefly among the topmost branches of certain dead trees, I succeeded in getting it. It proved to be a male Olive-sided Flycatcher; length, 7; stomach full of flies.

June 12, 1884, Duck Mountain: A high wind has silenced most of the birds. Shot an Olive sided Flycatcher, a male, stomach full of beetles and flies; it was uttering a robin-like "*chuck-chuck.*" The habits of this species seem to be somewhat between those of the Great Crested Flycatcher and the Wood Pewee. It is quite common here.

151. Contopus virens. Wood Pewee.

Tolerably common; summer resident of woods; Pembina (Coues). Winnipeg: Summer resident; tolerably common (Hine). Portage la Prairie: Common summer resident (Nash). Waterhen River (Macoun). Carberry: Rare; Duck Mountain, very common (Thompson). A specimen from northern Minnesota in collection of Smithsonian Institution (Blakiston).

On June 14, 1884, at Duck Mountain, in the spruce woods, I shot a Wood Pewee. It was uttering its familiar drawling note, *p-e-e r-e-e*, in its usual sleepy fashion. It is one of the very common birds of the thick woods of this region. Its cousin, the Western Wood Pewee, is equally common in the more open woods and groves. I was unable to keep specimens.

152. Contopus richardsonii. Western Wood Pewee. Richardson's Pewee.

Tolerably common; summer resident of woods and bluffs. Winnipeg: Summer resident; tolerably common (Hine). Carberry: Rare; west

slope of Duck Mountain, common (Thompson). Cumberland House: June, 1827 (Richardson).

On June 12, 1884, at Duck Mountain, I shot a Richardson's Pewee. The species seems quite common. In manners, habits, and note, it is a much sprightlier bird than its cousin *virens*. Instead of the drawling *p-e e r-e e* of the eastern bird, the usual note of this one is a loud, emphatic "*right-here*," which sounds peculiarly appropriate, when, gun in hand, one is cautiously and laboriously following the playful bird through the dense willows it frequents, and inwardly and intensely asking oneself: Where in the name of goodness has he got to now?

This species commonly frequents the open woods and willow thickets, while the *virens* seems to keep to the higher, heavier timber.

153. Empidonax flaviventris. Yellow-bellied Flycatcher.

Summer resident in woodlands. Duck Mountain, June 11, 1884, shot a flycatcher that was uttering continually a note like "*che-blic*;" it was all over of a greenish color, but yellow on the belly; it answers fairly well to the description of *flaviventris*, but is very like an Acadian shot yesterday; evidently the species is breeding here (Thompson).

154. Empidonax acadicus. Acadian Flycatcher.

Summer resident in woodlands. Breeding commonly at Manitoba House, June 15, 1881; nest taken somewhat like a *Vireo's* (Macoun). Binscarth: Duck Mountain; common (Thompson).

June 10, 1884, Duck Mountain: Collected Acadian Flycatcher to-day; it seems quite common here. June 12, Duck Mountain: Collected another Acadian Flycatcher; the species is quite common here.

155. Empidonax pusillus traillii. Traill's Flycatcher.

Summer resident, and doubtless much more widely diffused and common than these fragmentary observations would seem to indicate; common at Pembina during the migration in the first week of June (Coues). Lake Manitoba: June 17, 1881; only one specimen procured (Macoun).

156. Empidonax minimus. Least Flycatcher.

Very abundant summer resident of open groves; very abundant at Pembina; found also in Turtle Mountain; breeding (Coues). Lake Manitoba: nesting (McTavish). Shoal Lake: May 15 and 23, 1887 (Christy). Oak Point: 1884, arrived May 11; 1885, first seen, one, on May 22; is common, and breeds here (Small). Portage la Prairie: Common summer resident; arrives about May 16 (Nash). Found at Lake Manitoba and Red Deer River; also very common in the woods at Manitoba House; June 14, 1881 (Macoun). Carberry: Abundant summer resident; Turtle Mountain (Thompson).

On May 22, 1882, at land office, Turtle Mountain, saw Least Fly-

catcher in scrub along the river. It was flitting among the brushwood and the branches of the new-leafing poplar trees, uttering a note which I found I could as well—or as ill—express by the totally different syllables "*p-chr*," "*p-chr*," or "*sé-wick*," or "*s plit*," "*s-plit*," or "*chebec*," "*chibec*," or "*s-lick!*" Each of these is supposed to represent the same note, and each comes as near it as such descriptions can. This flycatcher was extremely busy perforce to keep himself alive in this inclement weather, when insects, his only fare, are so scarce.

By June 20, the Least Flycatcher is very common in the trees along the slough side woods and on the edges of every grove. Its constant occupation while perching is to reiterate its peculiar note "*chebec*." What the "naturally selective" object achieved by this may be, I can not say, unless it has the effect of notifying the various birds of this species of each other's presence, and thereby facilitating and expediting the duties of finding and choosing a mate.

On June 8, 1883, shot a pair of Least Flycatchers. One measures: Length, 5½; extent, 8¼; it answers to Jordan's description, but the lower mandible is yellowish. The other is similar; it is to be seen darting about after insects in every thicket and grove; its usual habit is to sit on a prominent lookout twig, pumping its tail, and "*chebec*"-ing until some hapless insect passes near, when he ceases his too monotonous tricks, launches forth, seizes his prey with an audible snap of his mandibles, and dashes again to his perch to take up the "*chebec*"-ing where he left off. This is a very abundant species here, on the plain. It is also a very lively bird, and has several different notes; one of these almost approaches a song.

May 30, 1884: Who ever would credit the chebec, a flycatcher, a clamatore, with singing a song—yet to-day I saw one that, in the exuberance of his spring exhilaration, soared up in the air and hovered in true flycatcher style to vociferate for over half a minute a song like "*chebec-tooral-ooral, chebec-tooral-ooral*," etc., and having finished gave a loud snap with his bill—a smack of delight—and glanced downwards aslant into a bush.

157. Otocoris alpestris praticola. Prairie Horned Lark, or Prairie Shore Lark.

Abundant resident of the prairies except in winter. Breeding specimens from Carberry and Pembina are identified by Mr. Dwight as *praticola*, also fall specimen from Rat Portage; from Red River westward, along the boundary to the Rockies, it breeds in profusion (Coues).* Shore Lark arrived before April 15 (Dawson). Winnipeg: Summer resident; abundant (Hine). Oak Point: 1885, first seen, four, on March 28; next seen on 29th; is common, and breeds here (Small). Portage la Prairie: 1884; common spring and fall visitant; stays nearly all the winter; disappears and reappears at intervals; arrives about March 20; reappears in August, and departs in October (Nash). Very abundant

* Specimens from the plains proper are *O. a. arenicola*.—R. R.

on prairies; trails along our route from Livingston to Fort Pilly and down on the west side of the river, in company with Lap Longspurs, first half of September (Macoun). Carberry: Abundant summer resident; breeding nine each season; resident, except during December, January, and February (Thompson). Two Rivers: 1884; arrived March 23 (Criddle). Brandon: 1882, March 20 (Wood). Shell River: 1885, first seen, fifty, on May 23; common in flocks going north; a transient visitant; not breeding (Calcutt). Qu'Appelle: Common summer resident; arrives April 1 to 25 (Guernsey).

On May 12, 1882, at camp 8 miles south of Brandon, midway between our tent and the fire 10 feet away, I started a small bird from its nest. It ran away very reluctantly, and continued wistfully close at hand, running about among the tufts of grass in the glare of the fire, and returning each time as soon as it dared. At gray dawn I found her on the nest again; she slowly walked away when I approached to rekindle the fire, but returned almost immediately with her mate; and now, for the first time, I saw them plainly. They were a pair of Shore Larks. Encouraged, no doubt, by the presence of her mate, she once more crept up to her nest and took up her position on the eggs, although I was but 5 feet off. Frying our bacon over a brisk fire, I was very careful to avoid hurting the birds or their home; and breakfast being over, travelers, tent, fire, and horses all went off and left them to discharge their duties in peace. The nest contained three brown eggs; it was sunken in the ground, and was made of grass and fiber, and lined with two or three large feathers.

My first real acquaintance with the Shore Lark at his home was in Minnesota, in the last week of March, 1882. A fearful blizzard, of course "the worst ever known in the country," had been raging for two days or more. On the third day, when it was nearly over, I was making my way out to see to the cattle. All the fences and low buildings were buried in snow; but the tall form of an elevator loomed up out of a circle of bare ground, caused by the eddying of the blast, and here, in the very vortex of the storm, in the thickest of the fight, were three or four little Shore Larks, bracing themselves against the driving wind and picking up the seeds that had been exposed by the displacement of the snow. Poor little things! I thought, you must be nearly at death's door; but even while I looked one of them, under the lee of the building, perched himself on a frozen clod and poured out his sweet, simple little song in a way that seemed to say, "How happy am I."

But the longest night will end, and it is not always winter, even at the Pole. The spring comes, and "the time of the singing of birds" arrives, and the brown Shore Lark raises his horns with sprightly air, and those who may chance to see him are now reminded that he is a near kinsman to the famed skylark—that indeed he is a skylark. Thus far he has sung only while perching on some clod or stone, but now

the ardor of his devotion to the demure little quakeress by his side demands a more ambitious demonstration; so, ceasing to sing, he strenuously endeavors to associate with the white piling cumuli, and having soared, apparently, near enough to be uncomfortably damp, while to us he appears a mere speck, he floats on vibrating wings, singing a song composed of a single note, oft repeated with lessening intervals; it may be suggested by the syllables *trick, trick, trick, trick, trick, trick, t-r-r-r-r-r-r-r-r-r-r,*" the notes at last all running together like the drumming of a partridge. During this performance he has lost much of his altitude, but at once proceeds to regain it by a series of bounds before again repeating the song. This alternate soaring and singing is usually kept up for over ten minutes, then the musician, having exhausted his energy, suddenly stops and dashes down with one frightful headlong pitch, right into the grass. Upon going to the spot one is surprised to find he has not been dashed to atoms by the violence of the fall, but springs up, uttering his usual call note, and flits further off, again to settle on the ground.

The whole of this performance will be seen to resemble very closely the serenade of the Missouri Skylark, the chief difference being that the Shore Lark is inferior in music and staying powers, and also in that the latter remains more nearly over one particular place. Another point of dissimilarity is, the Shore Lark sings chiefly on the ground, while the skylark confines his effusions almost entirely to his moments of physical elevation.

The Shore Lark is the earliest of the prairie singers to begin in the morning, being even a little earlier than the Meadow Lark; it commences before there is any sign of dawn, and at night it continues until the plains are enveloped in perfect gloom.

But singing will not multiply the species, and the two little "Quakers," as they are often called, set about nesting ere yet the snow is gone. Not seeking the shelter of bush or bank, but right out on the open prairie, on the level, they scrape a hole about an inch deep, then line it with grass and perhaps a feather or two from their mortal enemy, the hawk. In this are laid four or five brown eggs, freckled all over. This species has a curious habit, in common with the Baywing Bunting, of running on the road just before one and flying a little further on when overtaken. The Shore Lark does not usually repeat the maneuver more than twice or thrice, and frequently it suddenly squats and remains so until nearly within reach, when it springs up uttering its triple call-note and flies away to one side.

My observations incline me to believe that in Manitoba the species raises two broods each season.

157a. Otocoris alpestris. Shore Lark.

Fall migrant. Specimens of the true *alpestris* were taken by myself at Rat Portage and at Carberry in the fall (Thompson). Severn House: It appears common (Murray).

158. Pica pica hudsonica. American Magpie.

Rare, and found chiefly in the west. Rare; resident in the woods about Lake Winnipeg; have a single specimen taken 30 miles east of Brandon (Hine). One at York Fort (Hutchins). I have noticed these in western Manitoba only (Hunter). I was informed that this bird was not uncommon in the woods near the Assiniboine River, 20 or 30 miles west of Portage la Prairie, about fifteen years ago; but since that they have entirely disappeared (Nash). Have been told of its occurrence at Fort Ellice in the winter of 1881; did not see it; Upper Assiniboine, September 27, 1881 (Macoun). At Fourth Lake, Qu'Appelle: "Magpies are very numerous in the thin woods fringing the lakes," 1858 (Hind). Qu'Appelle: Occasional; plentiful 100 miles north (Guernsey). Only stray individuals passing to the eastward of the Mississippi or of Lake Winnipeg. * * * It does not entirely quit the banks of the Saskatchewan, even in winter (Richardson). Magpie first seen on the 7th of October at Mosquito Point, where the Belted Kingfisher was last seen; observed occasionally at Carlton, where it resides in the winter; not seen between Hudson's Bay and Lake Winnipeg (Blakiston).

She pe cum memewuck: the Magpye of Pennant. This bird breeds in trees; are plenty in the interior parts of the country, and a few are found near the southern settlements. In my twenty years residence in Hudson's Bay, I never knew them migrate to York Fort or Severn; only one was caught in a marten trap at York Fort. I don't think they migrate any distance, as our people met them inland at all seasons. (Hutchins's MSS., Observations on Hudson's Bay, 1782.)

159. Cyanocitta cristata. Blue Jay.

Tolerably common summer resident in woodlands; very abundant at Pembina (Coues). Pennawa River, September, 1857 (Hind). Breeding near Lake Winnepeg (D. Gunn). Swampy Island: 1885, common, resides permanently; they go to the south end of the island in summer to breed (Plunkett). Winnipeg: Summer resident; tolerably common (Hine). Oak Point: Arrived May 29, 1885; first seen, a flock of eight that flew overhead on May 24; next seen, three on May 25; a letter to Professor Cooke mentions that (February 6, 1885) two remained all winter about the place, and became quite tame (Small). Ossowa: Common; breeding; 1885, last seen, one on October 19 (Wagner). Portage la Prairie: Common; resident; the majority leave this locality in the winter, but I have seen some in every month in the year (Nash). Carberry: Tolerably common summer residents; breeding. Rat Portage: October (Thompson). Arrives early in April, departs late in November (W. G. A. Brodie). Found at Red Deer and Swan Rivers, September 2, 1881 (Macoun). Shell River: 1885, first seen, two, on May 15; next seen, three, on May 24, going north; a transient visitant; not breeding here (Calcutt). Qu'Appelle: Tolerably common summer resident; arrives May 6 (Guernsey). A specimen

from Red River Settlement in Smithsonian Institution; I noticed the absence of it on the route between York Factory and Lake Winnipeg (Blakiston).

160. Perisoreus canadensis. Canada Jay. Whisky Jack. Wis-Ka-tjan.

Common resident in wooded sections, especially among evergreens. Winnipeg: Summer resident; tolerably common (Hine). Red River Valley: Common resident; they breed here (Manitoba) in the month of March (Hunter). Resident locally at Portage la Prairie; very scarce (Nash). Very abundant in all the wooded country examined in 1881 (Macoun). "Whisky Jack numerous on the Scrub Oak Ridge," near Dauphin Lake, October 9 (Hind, 1858). Carberry: Common resident; breeds in the spruce woods to the south; Duck Mountain; Two Creeks, on Upper Assiniboine; Rat Portage, abundant (Thompson). Shell River: 1885; winter visitant (Calcutt). Severn House (Murray). Common at Carleton (Blakiston).

On October 13, 1883, at Two Creeks, west side of Assiniboine, I was awakened in the morning by a Whisky-Jack screaming close to my head. One or two of these birds have been in attendance at each of our camps since we came to this comparatively wooded region, to feast on the camp scraps, which we have always been careful to put where the birds could easily get them.

On June 11, 1884, at Duck Mountain, I found the young Whisky-Johns following their parents through the woods. One of these, which I shot, was all over of a very dark bluish gray, tinged on the wings and tail with a glaucous shade, which at once reminded me of the relationship existing between this bird and the Blue Jay. The noises which this family made were curious and varied. I have long ago learnt to ascribe to this species any unknown squeaks or wails that are heard in a spruce wood.

November 8: Whisky-Johns came as usual to our camp fire to day. They helped themselves to scraps but a few feet from me, and ultimately one alighted on the pot stick and took off a scrap of meat that I left there, although it was but a foot above a hot clear fire.

While moose hunting on December 6 we had crawled close to a herd, when suddenly the loud screaming of the Whisky-Jack was heard, and before we could get a glimpse of them the moose had sought safety in flight.

During the numberless times that I have camped in the winter woods of the northwest, I have hardly ever failed to have the Wiskachon for a companion. Sometimes I have been awakened in the morning by the melancholy wailing of the bird a few inches from my head. Many a time I have fed it with scraps placed in such situations that its courage would be sorely tried before it could secure the dainties. Once I laid a piece of meat on the snow between myself and my companion. After one or two approaches the bird rushed in and seized the morsel. Then I laid

a piece between myself and the fire some 6 feet away; this also was taken. Finally I stuck a piece on the end of the pot stick, which is a stout stick propped up so that it affords support to a kettle over the fire; and although by so doing the bird had to fly down within 6 inches of a hot clear fire, without hesitation it dashed in and secured the prize. Long experience has taught it that a camp is a sure place for a feast, and as soon as the ax is brought into play to prepare the firewood it is usual to hear the responsive "*tay tay*" of the Wiskachon approaching from some distant part of the timber. This call note of the species is much like the ordinary cry of the Blue Jay, but it has several others that are distinctively its own; this includes the melancholy sobs and wails which, sounding so uncanny among the gloomy evergreens, have surrounded the bird with an atmosphere of mythic interest. According to Archbishop Taché, Wesakedjan is the name of the coot and of the fabulous being who takes part in all Indian legends. Almost the only musical sound that I have heard it utter is a metallic "*chuck chuck*," not unlike that produced by the robin. The unmusical notes are so numerous that one is almost safe to attribute to the Wiskachon any unaccountable screams that may be heard within the presence of a spruce woods.

In the winter of 1881–'82 I saw one of these birds at Burnside, about 12 miles from Portage la Prairie, the only one I ever observed near there. In December, 1884, I found them abundant in the Riding Mountains, where they exhibited all the familiarity usually attributed to them.

In October, 1886, two or three frequented the woods on the bank of the Red River, but those were all I ever saw in that neighborhood.

Nearly all writers refer to the harsh notes of this bird, but omit to mention that it has some remarkably pleasing ones also, much resembling those of the Black Cap Tit but rather louder than it utters when traveling about in small parties, and also when alone if it feels particularly pleased with itself.

I can quite understand why trappers should dislike this bird, as it often does a lot of mischief to the skin of any animal that it may find dead in a snare, by eating holes in it; but it is a great favorite of mine, and will always be welcome to my camp, in spite of his petty pilfering of eatables. (Nash, in MSS.)

161. Corvus corax principalis. Northern Raven.

Tolerably common winter visitant; probably nesting in the northern lands. Tolerably common winter resident along the boundary (Coues). Winnipeg: Winter visitant; tolerably common (Hine). At Lake Winnipeg (Kennicott). Red River Valley: Resident, tolerably common more seen in winter than in summer (Hunter). "And in the spruce swamps were several ravens," October 9; near Scrub Oak Ridge, Dauphin Lake, Plains of the Souris, July (Hind, 1858). Portage la Prairie: Very scarce; permanent resident; in February, 1882, I saw one about 4 miles west of the city of Winnipeg, and on December 17, 1884, I saw two in the Reding Mountains (Nash). Carberry: Noted only in winter; Rat Portage, common in fall (Thompson). Not observed in the Winnepegosis region, but frequent in the Western Plains (Macoun). Qu'Appelle: Occasional (Guernsey).

December, 1882: During the past month or more I have seen a raven flying over the plain. From the tracks in the snow I learned that it was one of these that robbed my wolf trap of the bait. When flying overhead it resembles a large crow, but may be distinguished by its frequent sailing and by its voice, which is much deeper and is not unlike the bark of a dog, and it is from this I suppose that the bird is called "Barking Crow" by the Hudson Bay Company's employés. In the vicinity of Winnipeg it is a regular winter visitant, but when the spring returns it retires, probably to the rocky and timbered land in the region of the large lakes.

January 13, 1887, Rat Portage: Ravens continue as numerous as ever about the town. When unarmed one may sometimes approach within 20 feet of them. I subsequently saw the species in numbers at Schreiber's, north shore of Lake Superior (January 16), and at North Bay, Lake Nepissing (January 18), as well as at intervening points on the railroad. I observed it carrying food in its claws; and on one occasion, at North Bay, saw one transfer a bone from its beak to its claws and back again several times during flight. At Schreiber's they were particularly numerous and tame. Almost any strange, weird sounds, musical or harsh, heard in the woods there might, I found, be safely referred to the raven.

Raven (*Corvus corax*): Always to be seen; and so far from being a solitary bird, as it is called in Europe, I made a discovery in its habits of which I had no idea before. At the beginning of winter I observed that the ravens, which I saw about sunset no matter where I was, were always flying towards the same point, and I concluded there must be some large trees somewhere in that direction where a few pairs, perhaps, roosted. One day, therefore, after having been out with my gun, I made a point of returning to the fort in the evening by that quarter. Judge my surprise when, among some clumps of young aspen trees, none of which was above 25 feet high or thicker than my arm, I found one of these clumps literally filled with ravens, which, on my near approach, took wing and commenced flying about in all directions. I judged by counting a portion that there were upwards of fifty in that one place; and that no one should hereafter say, "Oh, they were a lot of crows," I shot one, which I keep as a specimen. I have been to the same spot on other occasions during the winter and always found my black friends. It is wonderful with what regularity of time they repair to their roosting place in the evening and leave again in the morning, by pairs, for their day's hunt. One pair flies directly over the fort each morning, and as I sit on watch for the minute hand of the chronometer to come round to each hour of observation as magnetic observer; they give a croak as they fly over, as a morning salutation, I suppose; at any rate I give them the credit for such civility; and looking to see the time I find it the same within two or three minutes, but gradually earlier and earlier, for the sun, which is their clock, is each day lengthening his course above our horizon. The raven is only known by the name "crow" here. (Capt. T. Blakiston, from Fort Carleton, 1858.)

162. Corvus americanus. American Crow.

Common summer resident of woodlands. A good many along Mouse River, at the boundary (Coues). Dufferin: Arrived before April 15 (Dawson). Red River Settlement: In 1859, before 4th of April; speci-

men from Nelson River in Smithsonian Institution (Blakiston). Winnipeg: Summer resident; abundant (Hine). Swampy Island: 1885, first seen, two, on April 6; next seen April 7, when it became common; is common all summer, and breeds here; last seen September 29; 1886, first seen, two, on April 6; bulk arrived April 8 (Plunkett). Cross Lake and at Lake Winnipeg (Kennicott). On Lake Winnipeg the young were able to fly in the beginning of July; not often seen in the woods; common on Hudson's Bay (Bell). Ossowa: Common; breeding; 1885, first seen, one, on March 29; next seen, April 10; became common April 16; last seen, one, on December 12 (Wagner). 1884, arrived end of March; 1885, first seen, one, on March 28; next seen on 29th; became common on April 10; is common and breeds here (Small). Portage la Prairie: Common summer resident; arrive at the end of March; depart about the middle of October; in 1884, first seen April 4; usually these birds come before the snow goes, but were late this year (Nash). Carberry: Abundant in migration only; summer resident; breeding at Fairview and at Binscarth (Thompson). Brandon: Two on April 10, 1887 (Wood). Dalton; 1889, first seen, three or four, on March 27; next seen on March 28; became common on April 8; breeds here (Youmans). Common on the Western Plains (Macoun). Shell River: First seen, five, on April 3; seen every day afterwards; common summer resident; breeds here (Calcutt). Two Rivers: 1885, first seen, two, on April 2; next seen, April 3, when it became common; ninety-one seen in one flight; fairly common and breeds here (Criddle). Qu'Appelle: Common; breeds April 1 to 5 (Guernsey). Trout Lake Station (Murray). Common all winter at Carleton (Blakiston).

On June 27, 1882, at Fairview, found a crow's nest in a poplar tree. It contained four fully fledged young ones. The old birds were very much excited. They flew about, cawing loudly. One of them alighted several times on a branch but 6 feet above my head, and, while cawing, or rather croaking, vigorously seized a twig in her bill and worried at it in a most savage manner, as though to indicate the treatment she would be glad to have me receive. Her voice during this curious performance was almost like a growl. Having noted that the nest was a remarkably strong, warm structure, and that the eyes of the young crows were blue-gray, I left the family in peace once more.

On August 30, 1883, on the road, I saw a flock of about two hundred crows; they appeared to be migrating. They were remarkably tame and let me approach them within 10 feet; of course I had no gun. With the flock were two brown harriers; once or twice I saw one of them make a sort of a stoop at a crow, but the latter took but little notice beyond moving a little further off. Later in the day I saw another flock of about thirty crows, and with them one brown harrier, who quite behaved as though he were a reputable member of the crow community.

On September 7, a boy brought me a living crow that he had winged;

its upper mandible was bent in the middle at right angles nearly and pointed downward, crossing the other, which was straight at one side. I kept it alive to see how it fed; it was able to pick up bread from the floor, but at each bite it had to turn its head, with the crown to the ground; when killed it proved to be quite fat.

On June 6, 1884, at Binscarth, on the Upper Assiniboine, I found a crow's nest in a bluff of poplar trees. It was in a crotch of a large poplar, about 8 feet from the ground, and was one of the most beautiful specimens of bird architecture I ever examined, excluding, of course, all pensile nests. It was a large structure of sticks, twigs, and bark strips, with a very deep cavity lined with fine fibers and beautifully finished off with a coating of cow's hair. It contained four eggs.

Ha ha sen: The crow. These birds are plenty inland but seldom appear on the coast. * * * This bird is migratory. (Hutchins MSS., Observations on Hudson's Bay, 1782.)

163. Dolichonyx oryzivorus albinucha. Western Bobolink. White-naped Bobolink.

Carberry: Specimens are referred by Mr. Ridgway to the form *albinucha*, therefore I assume this to be the form throughout. Common summer resident on the prairies; at Pembina, breeding in large numbers, and westward along the boundary to the mountains (Coues). North to Selkirk Settlement (Ridgway). Winnipeg: Summer resident; abundant (Hine). Stony Mountain: In every little bluff of aspen or willow the beautiful rice bird (*Dolichonyx oryzivorus*) was seen or heard (Hine). Ossowa: Breeding (Wagner). Oak Point: 1884, arrived May 23 (Small). Portage la Prairie: Common summer resident; arrives about the 20th of May; departs the end of September; in 1884, first seen, June 1; last seen, July 22; at this date they were changing their plumage and gathering into flocks (Nash). Carberry: Common summer resident near Turtle Mountain; near Long River (Thompson). Dalton: 1889, first seen, five, on May 22; breeds here (Youmans). Quite common on the prairies in Manitoba, from Grand Valley to Cypress Hills (Macoun). Shell River: 1885, first seen, one, male, on May 18; next seen, ten, on May 24; is common all summer and breeds here; nest with six eggs found (Calcutt). Qu'Appelle: Tolerably common summer resident; breeds; arrives May 15 (Guernsey).

July 25, 1884: Bobolinks still in breeding plumage at Carberry, although at Portage la Prairie I noted them changing three days ago, but early in August the change takes place, and Bob discards his motley and bells. The play is over, the clown of the pantomime lays aside his license and livery, and, like many real clowns out of dress, he is a very serious character. He is now silent, or only utters a metallic "*klink*" and goes very intently about the very prosaic business of finding out where, with least trouble, he can get the largest meals.

The Bobolink (*Dolichonyx oryzivorus*) is of course common. I saw birds in both the black and buff plumage together at Carberry on August 30. (Christy.)

Towards the end of July, after breeding, these birds collect into large flocks, and the old males change their plumage. They then leave the prairie and attack the oat fields, doing, with the assistance of the Grackles and Redwing Blackbirds, an immense amount of mischief. After the oats are cut they resort to the marshes, feeding on wild rice, etc., until the cool nights inform them it is time to leave. (Nash, in MSS.)

164. Molothrus ater. Cowbird.

Abundant summer resident throughout the prairie regions. Abundant at Pembina and westward along the boundary to the mountains (Coues). Red River Settlement on 28th April (Blakiston). Winnipeg: Summer resident; abundant (Hine). Oak Point: 1886, arrived April 14; 1885, first seen, one, on April 15; is common, and breeds here (Small). Ossowa: Breeding (Wagner). Portage la Prairie: Common summer resident; altogether too abundant; with the same parasitical habits in nesting as elsewhere; arrives about May 25; departs in the early part of October (Nash). Carberry: Abundant summer resident on the prairies; Souris River, May (Thompson). Common everywhere on the prairies (Macoun). Shell River: 1885, first seen, five, on May 14; afterwards seen every day all summer; is common; lays eggs in the nests of the Song Sparrow and Yellow Bird (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 20 (Guernsey).

I noticed that on the Big Plain the cowbirds disappear for a time, apparently joining the rusty grackles and other species among the swamps and wet lands until after the attainment of the fall plumage, when for a time they again became conspicuous, and continue about the pastures until October.

165. Xanthocephalus xanthocephalus. Yellow-headed Blackbird.

Common summer resident of the deeper sloughs of the prairie regions. At Pembina, breeding abundantly; Turtle Mountain and Mouse River at the boundary (Coues). Dufferin: Arrived between April 25 and 30 (Dawson). Winnipeg: Summer resident; abundant (Hine). Shoal Lake: May 15, 1887, very abundant (Christy). North to fifty-eighth parallel, but not to eastward of Lake Winnipeg (Richardson). Ossowa: Breeding (Wagner). Oak Point: 1884, arrived May 5 (Small). Portage la Prairie: Common summer resident; arrives about May 1, departs early in October; in 1884, main body arrived May 6; some few came before this (Nash). Prairie Portage (Hind). Carberry: Rare summer resident; Brandon (Thompson). Two Rivers: 1885, first seen, two, on May 1; fairly rare (Criddle). Dalton: 1889, first seen, two, on May 4; next seen on May 10, when it became common; breeds here (Youmans). Abundant around pools and marshes from Pembina to Winnipeg, in sedgy ponds, west to Moose Mountain; not noted in Winnepegosis region (Macoun). Shell River: 1885, first seen, one male, on May

1; next seen, four males, on May 3; is common here all summer and breeds, nesting in the bullrushes (Calcutt). Qu'Apelle: Common summer resident; breeds; arrives April 18 (Guernsey.)

The voice of this bird is somewhat like that of the redwing, but is more varied, and in many of its intonations presents such a curious resemblance to the human voice as to suggest the possibility of its learning to articulate words. Its distribution is regulated by the amount of sedgy marsh in a neighborhood; thus, south of Winnipeg it is exceedingly abundant, and at Portage la Prairie it is very common; but in the immediate vicinity of Carberry it is the least common of the blackbirds. In its nesting and general habits it somewhat resembles the redwing, but is more terrestial and less disposed to haunt willow sloughs.

Arrives about May 1; departs early in October. A frost just sufficient to form a thin coat of ice on standing water, on the night of October 6, 1884, drove out the whole army of these birds and all kindred species that roost in the reeds of the sloughs. I watched them in to roost that evening, as usual, but at daylight the next morning they had gone, leaving only a few straggling grackles behind.

Does not occur east of Long Lake, a sheet of water about 22 miles west of Winnipeg, near which city I could not find it or hear of it, although the country seems to be just suited to its want. (Nash, in MSS.)

166. Agelaius phœniceus. Red-winged Blackbird. Soldier Blackbird.

Abundant summer resident, frequenting the willow-edged sloughs. Pembina (Coues). Common at Red River Settlements (D. Gunn). Red River Settlement on April 26 (Blakiston). Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Summer resident; abundant (Hine). Ossowa: Common; breeding; 1885, first seen, one, on April 25; next seen on April 26; became common April 28 (Wagner). Oak Point: 1884, arrived April 14; 1885, first seen April 18, next seen April 19; is common and breeds here (Small). Portage la Prairie: Common summer resident; arrive about April 15; depart early in October, though in 1885 a small party remained here until nearly the middle of November, long after everything was frozen up; they frequented my garden, feeding on the sunflower seeds; when these were exhausted I saw no more of them; in 1884, first seen April 22 (Nash). Very common in willow ponds in the Winnepegosis region (Macoun). Carberry: Abundant summer resident; breeding near Shoal Lake, west (Thompson). Two Rivers: 1885, first seen, several, on April 16; next seen, April 17; became common, with two other species, April 18 (Criddle). Dalton: 1889, first seen, one, on April 13; next seen on April 15, when it became common; breeds here (Youmans). Shell River: 1885, first seen, thirty-one, on April 13; afterwards seen every day, male and female, in flock; common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 18 (Guernsey).

June 11, 1882: Went in the morning with two brothers to the lake in the sand hills east of De Winton; saw there large numbers of Marsh

Terns and various kinds of blackbirds. I was unable, from the depth of the water, to reach the place where the terns seemed to be nesting, but found the nest of the Red-winged Blackbird in a few twigs that projected about a foot above the water, here 3 feet deep, and some 10 feet from the shore. I saw the female leave the nest, so that the identification is good. The male did not put in an appearance at all. The nest is very deep, neat, and strong; it is suspended from about a dozen upright twigs and is built much like that of a Baltimore Oriole, but entirely of grass. The eggs, four in number, were all fresh; one was 1 by $\frac{11}{16}$, pale blue, and scrawled over with most curious hieroglyphs in brown-black ink; the others were similar.

On August 9, 1884, while at Humphrey's Lake, I noticed that in the redwing colony there, although females and young birds were very numerous, only one male was to be seen. It would seem that the males leave the scattered breeding places and repair to the great marshes at this season and later on the females follow with the young.

This curious habit is said to belong also to the Boat-tailed Grackle (*Quiscalus major*), while the late summer disappearance of the cowbirds may be a propensity somewhat similar in its nature.

During the courting season the male Redwing may be seen approaching the female in most beseeching attitudes and giving vocal expression to his feelings from time to time, while his wings are slightly raised and the gorgeous patch of scarlet feathers on the shoulder expanded so as to appear thrice as large as under ordinary circumstances. Doubtless he is as much indebted to the latter as to his vocal appeal for the ultimate success of his suit.

The usual note of the species is a short, harsh "*chick*," but it is often heard to utter a shrill whistle, during which I have seen the bird dashing straight across the field or marsh with a flight so steady and swift that I have sometimes wondered for a minute what bird it was.

The "song" of the Redwing is a sort of guttural squeal; it has been happily syllabilized as "*conk-que-ree.*" The effect of this, when uttered by what seemed to be a million voices, as I heard it among the reed-beds of Portage la Prairie slough, is not unmusical, and to the naturalist is pleasing in its significance of the multitudinous life about him, though it must be confessed that the granivorous propensities of this and all other blackbirds leave little chance of the farmers finding a similar enjoyment in the pleasant aggregation of unpleasant individual notes.

Shortly after the end of August all the species disappeared from here, but in such large reed-beds as that mentioned above they gather in thousands and linger until the frost drives them south, about the middle of October.

167. Sturnella magna neglecta. Western Meadow Lark. Prairie Lark.

Abundant summer resident of the prairies. East to Pembina (Ridgway). Pembina, and westward along the boundary to the Rockies; com-

mon (Coues). From 60 miles south of Red River Settlement (Blakiston). Dufferin: Arrives between April 25 and 30 (Dawson). Winnipeg: Summer resident; abundant (Hine). Ossowa: Common breeding; 1885, first seen on April 6; next seen April 15; became common on April 19 (Wagner). Shoal Lake (Gunn). Shoal Lake: May 16, 1887 (Christy). Oak Point: 1884, arrive May 17; first seen, one, on April 9; next seen on 10th; became common on 13th; breed here (Small). Portage la Prairie: Common summer resident; arrives about April 10, departs about the middle of October; in 1884, first seen, April 15; in 1883 saw it in March (Nash). Carberry and the Big Plain, generally; to the Fingerboard; common summer resident near Turtle Mountain, Brandon, Milford (Thompson). Abundant on the prairie along the route marked; not seen in the Winnipegosis region (Macoun). Two rivers: 1885, first seen, one, on April 16; next seen, April 17; fairly common; breeds (Criddle). Dalton: 1889, first seen on March 26; next seen on March 28, when it became common; breeds here (Youmans). Shell River: 1885, first seen, one male, on April 12; a common summer resident, and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 5 (Guernsey).

April 17, 1882: The prairies are showing brown in places, and snow-banks are settling and losing their whiteness, through the grass that begins to show through them. Three Meadow Larks alighted on the fence to day, quite near to me, and one of them delighted me by vociferating his short rich song with a beauty I never before heard.

April 18: On Sunday we saw a few Meadow Larks about; on Monday the number was increased and an occasional jingle was heard; but to-day (Tuesday) at dawn scores of larks had appeared, and, as if by concert, all together burst into an explosion of splendid song, gushing out their rich, strong warblings from every little height and perch, singing with all their might; singing, as if under pressure; sing they must; perched on a fence, perched on a clod, running on the ground or flying high in the air, they sing and *must* sing aloud for the spring; singing they saw the dawn and the noon and the evening, and still they sang on till night came and the prairies were hidden in darkness, then for a while they ceased; but the rising of the yellow moon above the eastern fringe of trees was loudly hailed by many of the joyous birds and greeted with a renewal of this morning's burst of song.

April 27: Fall of snow last night, but this morning it changed to rain, and by 10 a. m. no snow remained. A Meadow Lark contrived to sing in all the pelting shower; he was not 100 yards from the door; so I took the telescope, paper, and pencil and made a sketch of him.

May 5: Took special notes on the position of Meadow Larks while singing to-day. Altogether, I observed twelve that were in full song; of these, nine were singing on trees, two in the air, and one on the ground. Their song, when on the wing, is entirely different from that

while perching; it is more like the prolonged trilling of the English Skylark.

June 4: Found a Meadow Lark's nest about 3 yards from the nest of a Prairie Chicken. This latter I had frequently visited, so that the lark had probably watched me on several occasions from a distance of only 2 or 3 yards, and yet had not betrayed her charge by flinching, and most likely I would not have found it had I not chanced to step nearly on it. This nest now contained young ones. I watched them until June 17, when I found they had flown.

On June 2, 1883, I saw four Meadow Larks all fighting, and at the same time singing in the air together. It was a curious competition and lasted for a minute or more; then down into the grass they dived en masse, there to continue for several minutes their noisy battle for the mastery. Possibly one of the number may have been a female, for whose favors the rest were competing.

On July 30, Miller Christy shot a young Meadow Lark, a male; stomach filled with insects, apparently all coleoptera; it had very little yellow on the breast, and the crescent was represented only by a few streaks. On its breast was an ulcer that nearly reached the bone; apparently it had been caused by a barb of a wire fence, against which the bird must have flown within the last fortnight.

Plain south of Shoal Lake, June 22, 1867: In passing over the plain we shot a Meadow Lark. These birds are found in pairs along the Red River to the end of the plains, and on the south side of the Assiniboine. They appear in pairs in May, generally perched on a low tree, willow, or reed. They are very watchful, seldom allowing the hunter the chance of a fair shot. (D. Gunn.)

THE SONG OF THE PRAIRIE LARK.

[Reproduced from the American Magazine, April, 1887.]

How often and often we hear the hackneyed statement, "America has none but scentless flowers and songless birds," and how invariably we find that it proceeds from persons whose ideas of birds and flowers are gathered wholly from books and magazines, and these chiefly of European origin! There are many able writers ready and willing to do justice to the beauty and the fragrance of our numberless wild flowers, but those whose opportunities and dispositions enable them perfectly to observe and completely to record what of bird-song comes within their ken are few in number. For this reason I wish to give publicity to my observation of the Western Meadow-lark—the sweet singer of the plains, and the most gifted of American feathered musicians.

For years the skylark of England was my familiar friend, and his glorious song was my daily joy. Many times have I heard the famed nightingale singing by moonlight and by daylight in the shady woods of Saffron Walden, in Essex, and nearly all the noted songsters of England became more or less familiar during a sojourn of several years as a stranger in my native land. Then came a change that brought

me once again among the birds of my boyhood—those of Canada, my home—and also for the first time enabled me to hear the song which has given me such unalloyed delight.

It was springtime in Manitoba; the season of blizzards was nearly past, but the prairies were still buried deeply out of sight, and the north wind was yet howling over the plains. We were looking for signs of spring, but I was not prepared to hear, from the very bosom of a gale, a loud, melodious chant, short and sweet oh—how sweet after the long silent months of winter! "There's the lark!" cried my more experienced brother. Yes, it was the lark, the herald and king of the host of singers that were now at length coming home again from the south. As I knew the Meadow Lark of eastern America, and was acquainted with its short and rather ordinary song, the ascription of such a burst of melody to a Meadow Lark seemed rather surprising; but before that summer was over I had found out that the prairie bird is very widely different in voice, powers, habits and all but appearance from his near kinsman in the east.

On the day after the initial spring greeting the weather was pleasanter; other larks were to be seen, and an occasional warble was heard. The next day at dawn scores of larks had appeared, and as if by concert, all together burst into a splendid explosion of song, pouring out their rich, strong voices from every little height and perch, singing with all their might. Standing on a clod, running on the ground, or flying high in the air, they sing and *must* sing aloud for the spring. The dawn, the noon, the evening passed, and still they sang; not till night came on and black darkness covered the plain, did they for a while cease; but the rising of the yellow moon above the eastern fringe of trees was loudly hailed by many of the joyous birds, and greeted with a renewal of their morning bursts of song.

All through that spring and summer I had ample opportunities of hearing and studying the music of the delightful Prairie Lark. Nor did I forget to make what record I could of his varied chants, that I might more accurately describe them afterward. Some of them I give in musical notation, though indeed the bird does not sing strictly in the music of our scale, nor does there usually appear to be any true recognition of time.

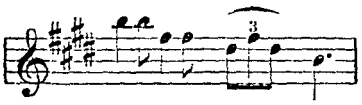
The first, the short warble of spring-time, is nearly thus:



Varied and replaced by another:



Or one yet more characteristic:



And also, as the season advances, by a third and longer chant:



These bars, reproduced on a flute, will suggest with fair accuracy the mere notes of the song; but they can not suggest the bleak prairie scene nor the blizzard that fails to drown the singer's voice; nor the long, silent months gone by, without which the life and meaning and true feeling of the stirring call can not be understood.

As the full springtime comes on, the number of these short chants is greatly increased, whilst their prolongations and variations are without number; and soon it becomes evident to the most casual observer that the love-fires are kindling, and that each musician is striving to the utmost of his powers to surpass all rivals and win the lady lark of his choice. On one occasion, as I lay in hiding near a fence, three larks came skimming over the plain. They alighted within a few yards of me, and two of them burst into song, sometimes singing together and sometimes alternately, but the third was silent. When at last they flew up I noticed that the silent one and one of the singers kept together. I had been witness to a musical tournament and the victor had won his bride.

Nor does the love-fire languish after mating; for now the lark is inspired anew, and springing up from the grass he soars high in the air and pours forth a rhapsody that seems to flood the very plains with sound—ringing and bursting; richer far than song of nightingale; prolonged like the skylark's melody; wild with passion and fire, and more varied than tongue or type can tell. Often have I tried to record the changing bars of music, but never with any but the most trifling success. A few of the notes were caught, but the volume of the song was far beyond the power of symbol or staff to represent. Commonly the refrain began with a part nearly thus:



succeeded after several repetitions by another:



All after that was a torrent of melody beyond any mode of expression at my command, until the final bar with flute-like clearness is rendered and repeated:



and then the singer sails downward to the prairie where sits the one for whom alone was meant this passionate strain.

There is yet one more type of song with this bird. It is a prolonged tender warbling, quite unlike the far-reaching chants, for it is so low and soft that at a hundred yards distance it becomes inaudible. I have heard it only a few times, and then it was uttered by the male bird, standing on some low perch not far removed from the nest where his less musical though not less beautiful mate was brooding.

Throughout the nesting season the air-song and the gentle conjugal refrain may be heard in full strength, for love is the life of their melody; but after the young have flown these are heard no more, though still the shorter lays are uttered daily and hourly from the few low perches offered by the prairie.

During the heat of summer, when other birds are hushed, the Prairie Lark continues in song both by day and by night; and even when chill October draws nigh, he still lingers on the prairies and warbles in the brown grass with much of the power and sweetness of springtime. The latest seasonal observation that I have of the bird was of one singing a farewell to the already snow-whitened plains late in October, after which he took wing, and I watched him till out of sight in the southern sky.

How comes it that this prince of songsters has so long continued almost unknown? Why are we of the new world so heedless of our native singers? Had such a voice been brought forth in Italy, its praises would have furnished a worthy theme to many a noble pen:

> And Ovid, could he but have heard,
> Had hung a legendary pain,
> About the mention of the bird.

True, I find on reference to standard works of natural history brief notes in connection with our bird, such as "One of the most delightful voices of the prairie" (Coues); "Impressed by its wonderful beauty of song" (Brewer); "Their songs are lively, sweet, and varied; they sing at all seasons, early and late, from the ground, from the tree-top, and in the air" (Cooper); "Highly musical, contending even with the mocking-bird for supremacy in song" (Lieutenant Couch); "In the depth of its tone and the charms of its articulation its song is hardly excelled" (Ridgway).

And yet so inadequate is the power of mere words, that, though I had previously read these opinions, I was wholly taken by surprise when

first on the prairies of the Assinaboine I heard the voice of the Meadow-Lark of the West.

One writer compares it with the rich-voiced wood-thrush; another, with the gifted mocking-bird, and again parts of its song have been likened to the soft warbling of the blue bird. But nearly all of this qualified praise is from the pen of passing travelers, few of whom have, like the writer, spent season after season with the bird, hearing its spring greeting and its fall farewell, resting so near to its nest as to hear its vesper warble, its midnight song of peace, and its salute to dawning day. Few have actually witnessed the song contests of the rival birds, and fewer still have overheard the soft consoling lay of the male to his sitting mate.

In listening to each of these varied effusions again and again, I have been peculiarly fortunate, and each season spent on the prairies has intensified the admiration I felt for our bird; for, though indeed it will not compare with the skylark in continuity of inspiration, it is second to nothing else. In richness of voice and modulation it equals or excels both wood-thrush and nightingale, and in the power and beauty of its articulation it has no superior in the whole world of feathered choristers with which I am acquainted. The more I heard of its melody the deeper was the admiration with which it inspired me, until at length I have learned to look on our lark as the noblest of bird-musicians, and the very incarnation of the wild, free spirit of the West.

No bird is more characteristic of the prairies than the Meadow-lark (*Sturnella neglecta*). It is very common in summer and breeds abundantly. Its clear, musical whistle (almost, if not quite equal to the song of the nightingale) is uttered by the bird either when upon the wing, the ground, or a tree, and may be heard for a great distance. Towards the end of August, though the birds had not left, they had largely ceased whistling; but the arrival of a few warm days, about the 10th of September, set them off again for a time. When I left, about the middle of October, there were still a few small family parties about, though the great majority had gone south. It is decidedly a shy bird, even in a country where most birds are notably less wary than in England; and, common as the bird is, it is no easy matter to obtain a specimen just when one wants. Late in July I shot a young specimen with a large festering sore on its breast, doubtless caused by its having accidentally flown against a spike on one of the numerous "barb-wire" fences on which this bird frequently perches. Not long after I shot a Purple Grackle with an old wound on its head, which was probably occasioned by the same means. I have often thought what a capital thing it would be to introduce the Meadow Lark into England. So far as plumage and song are concerned, it would take rank among our brightest colored and most admired songsters; while its hardy nature would allow of its remaining with us the whole year round, as indeed it often does in Ontario and other districts farther south than Manitoba. Perfectly harmless and accustomed to grassy countries, it would quickly become naturalized in our meadows, where it would find an abundance of insect food, and would doubtless soon increase sufficiently in numbers to serve, if need be, as a game and food bird, as it largely does in the United States. No other songster that I ever heard equals this bird in the sweetness and mellowness of its notes. (Christy.)

168. Icterus spurius. Orchard Oriole.

One male specimen, June 6, 1873, at Pembina, the only locality where observed (Coues).

169. Icterus galbula. Baltimore Oriole.

Common summer resident of open woodlands in the south and west. Abundant at Pembina; breeding; the only locality where found along the line (Coues). Winnipeg: Summer resident; abundant; found not quite so far north as the Rose-breasted Grosbeak (Hine). Oak Point: 1884, arrived May 25; 1885, first seen, one, on May 19; is common and breeds here (Small). Ossowa: Common; breeding; 1885, first seen, two, on May 15; next seen on May 17; became common on May 19 (Wagner). Portage la Prairie: Common summer resident; arrives about May 20; in 1884, first seen, May 27 (Nash). Carberry: Common summer resident (Thompson). Very common in woods around Lake Manitoba (Macoun). Shell River: 1885, first seen, one male, on May 16; next seen, four, on May 18; is common here all summer and breeds (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 18 (Guernsey).

On June 25, 1882, on the north bank of the eastern slough, I found a Baltimore Oriole's nest in an oak tree, about 10 feet high. As I was climbing the tree the female bird flitted about, uttering a loud, harsh chatter; as she often came close to my head I had good opportunity of viewing her graceful form and rich yellow plumage, and I thought her the most beautiful bird I had ever seen, until a moment later her splendid mate flashed into view on an adjoining bough, and stood there blazing in the sun. He was much less bold than his mate, and did not chatter in the same way, but uttered a loud "*puhee*" like a fragment of his song.

This nest was about 4 inches deep. It was formed of the outer bark of the Aselepias, and so thoroughly interwoven and "darned" that the fabric was like a thick warm felt. It was remarkably strong, too, and with a view to testing it in this particular I brought it home with the branch that bore it, and, having hung to it a pail by a band across the upper surface, proceeded to add weight. Fifteen pounds was gradually added without its showing any signs of breaking, but at the seventeenth the weight slipped to one side, and being thrown upon but one of the fastenings, broke it. I then procured another nest, an old one of the same material, and tried it successively with 15, 20, 25, 27 pounds, and still it held together; 29 and 30 were reached without breakage, but at 31 it began to give, and after a few seconds the weight tore through the fabric, without, however, injuring the fastenings at the top.

On October 19 found an old nest of an oriole down by the slough. It was woven of strips of Aselepias bark and suspended from four or five twigs. I made a careful test of its strength and found that it bore

15 pounds weight without the least sign of breaking, but an additional 2 pounds, thrown carelessly on, tore it from its fastenings.

170. Scolecophagus carolinus. Rusty Blackbird.

Enormously abundant migrant. Pembina (Smithsonian Institution) (Blakiston). Very abundant at Mouse River, on the boundary, after the second week of September (Coues). Dufferin: Arrives before April 15 (Dawson). Morris: April 29, 1887 (Christy). Ossowa: 1885, first seen, one, on April 8; next seen on April 16; became common April 20; last seen, about twelve, on October 24 (Wagner). Very abundant during the spring migrations, and again from August to the middle of October; arrive about the 10th of April; some of these birds may remain to breed in this locality, but I have not found them so engaged (Nash). Very abundant on Swan River in September, 1881 (Macoun). Carberry: Extremely abundant in the migration; Rat Portage: October (Thompson). Severn House; Trout Lake Station, the most northerly species (Murray).

April 15, 1882: Snow still deep everywhere, but melting fast. In the poplars along the slough side to-day was a large flock of Rusty Grackles. They were singing together their loud, jingling, spring notes, and the sound was like a chorus of innumerable sleigh bells.

April 21: The thousands of Grackles have been increased to tens of thousands. They blacken the fields and cloud the air. The bare trees on which they alight are foliated by them. Their incessant jingling songs drown the music of the Meadow Larks and produce a dreamy, far-away effect, as of myriads of distant sleigh bells. Mixed with the flocks of Rusty Grackles now are a few Red-winged Blackbirds.

171. Scolecophagus cyanocephalus. Brewer's Blackbird. Satin-bird. Blue-headed Blackbird.

Abundant summer resident. Pembina (Kennicott). Abundant along the boundary, from Pembina to the Rockies; breeding (Coues). Winnipeg: Summer resident; abundant (Hine). Ossowa: Common; breeding (Napull). Carberry: Abundant summer resident; breeding. Big Boggy Creek: Common; breeding (Thompson). Portage la Prairie: These birds commit fearful depredations in the oat and wheat fields after the grain is ripe, particularly if grown near the woods or a marsh (Nash).

On June 8, 1882, C. T. found a grackle's nest on the newly harrowed ground in a field not more than 20 yards from a clump of willows. The eggs, five in number, were in a slight hollow in the ground, without a single straw or any pretence at lining. My brother sprang the bird and then called me. I did not see the bird rise, but a pair of grackles were flying about and noisily resented our interference, and as no other birds were near, I feel safe in the identification.

On June 21, while walking by the south slough, I came upon two grackles that were at great pains to inform me that their nest was close

at hand, and also that my presence was most unwelcome. I at once set about seeking the treasure house, and found my ablest assistants in the birds themselves, for, as little children playing at hide and seek direct each other by crying "hot" or "cold," so these grackles guided me, ceasing their clamor somewhat as I receded, and redoubling their outcries when I approached the site of their nest. In this way I soon found it. It was placed on the ground in the open, sheltered only by a few weeds; it was a bulky structure, composed chiefly of roots, but lined with hair. It contained three eggs of the grackles and one of a cowbird. I have never before heard of a cowbird intruding its foundling on a species larger than itself.

September 18, 1882: September is going fast now; in the early mornings the sky has a cold steel-blue look along the horizon, and the clouds that come up are white and lumpy looking. We are expecting frost soon, for many signs announce that the fall is here and passing quickly. Already the grackles are gathered in the immense flocks in which they migrate, and are even now moving southward. We thought them numerous in the spring, but they seem to be ten times as plentiful now. The sound of their wings as they arise or fly overhead is like the noise of rushing breakers; it is not at all like thunder, as some have described it, but resembles the rattling *shr-a-a-ay* of surf on the shingly beach. The murmur is so continuous as to suggest the roar of a waterfall, and, as in that, there is a beat in this, thus: *shrá-rá-rá-rá-rá*, etc., making the resemblance still more perfect. Their loud *crek-crek's* also combine to form a great sound; it does not unite with noise of the wings, but remains sharp and separate on the vaster volume, just as the black dots and wriggles sometimes seen on their eggs remain separate and contrasting with the purple mottlings, though occupying the same ground.

This grackle is generally distributed throughout the Assiniboine Valley. It arrives and moves so constantly with the Rusty Grackle that it was but lately I learned to distinguish them, and my previous impression on the subject of their specific distinction negatived the value of a number of observations.

The dozen of nests of this species which I have examined were all either on the ground or in low forks or saddled on logs, close to some pond, and were more or less composed of mud when elevated. I found half a dozen nests around a single small lake on the Duck Mountain. The eggs are in color between those of the Rusty and Purple Grackles.

172. Quiscalus quiscula æneus. Bronzed Grackle. Crow Blackbird.

Abundant summer resident wherever there is both wood and water. Abundant at Pembina; breeding; Mouse River (Coues). Winnipeg: Summer resident; abundant (Hine). Red River Settlement (Gunn). Ossowa: Breeding (Wagner). Oak Point: 1884, arrived April 10; 1885, first seen, two, on April 16; next seen on April 18, when large

flocks came; is common and breeds here (Small). Portage la Prairie: Very common summer resident; arrives about April 15, departs early in October, the first frost hard enough to form ice driving them out; first seen in 1884, April 16 (Nash). Very abundant about ponds in the Northwest (Macoun). Carberry: Common summer resident; breeding; Duck Mountains; common; breeding (Thompson). Dalton: 1889, first seen, four, on April 8; next seen, April 12, when it became common; breeds here (Youmans). Shell River: 1885, first seen, seventeen, on April 15; next seen, a hundred, on April 22; became common on April 24; male and female in flock; common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 25 (Guernsey). In September I found the Crow Blackbird sparingly (along Nelson River) between Hudson's Bay and Lake Winnipeg; also westward, except about the little cultivated ground at Norway House and Cumberland, after which (October 4) are not seen (Blakiston).

On May 1, 1882, W. Brodie shot into one of the immense flocks of grackles that frequent the stubble field, and brought down sixteen Rusties and one Bronze at a single discharge. The Bronze was so little hurt, being slightly grazed on the wing, that his death sentence was commuted to imprisonment in a nail keg under strict surveillance. As he manifested a cheerful and intelligent disposition he was soon allowed the additional privilege of making himself a veritable nuisance in every corner and department of the house, and so thoroughly and assiduously did he apply himself to take the fullest advantage of this liberty that every one but myself was thankful when, after a few days of pretended resignation, he took the first opportunity of skipping out of doors for good. My observations on this bird were much as follows: He would eat anything that was eatable, but preferred flesh. A mouse he would hold in his claws and devour exactly in the manner of a hawk, swallowing each morsel as it was torn off by his bill. This sanguinary taste, I fear, points to a nest-pilfering propensity that I am sorry to admit.

I never before saw a wild bird take so readily to captivity. Within two or three days he became quite at home in the kitchen, and perfectly familiar with the place and purpose of the water pail. He had a curious way of hanging downwards from the rim when the water was low, so as to reach it, and he never failed to search for the pail whenever he desired to drink. I often detected in the croaks and cries he uttered a peculiar, almost human, *timbre*, that suggested the possibility of his learning to articulate words. From the first he exhibited a magnificent development of impudence and vanity. He would pose in the sun and admire the effect of it on his really splendid plumage, till one would suppose he thought he was the Bird of Paradise itself, instead of merely a very distant relative. Altogether, in spite of his troublesome disposition, his playful ways and general cuteness made me so fond of him that I was heartily sorry when poor Jack disappeared.

173. Coccothraustes vespertinus. Evening Grosbeak.

Common winter visitant; possibly nesting. Winnipeg: Tolerably common winter visitor (Hine). I have never seen this bird myself here during the summer months, but have noticed them in the autumn, winter, and early spring at Selkirk and Big Island, on Lake Winnipeg; the half-breed who was with me at Big Island told me that they were at Selkirk all the year round (R. H. Hunter). Portage la Prairie: Abundant winter visitor from October 15 to about May 16; Winnipeg, less common; Riding Mountain, in December (Nash). Shell River: 1885, seen February 20 (Calcutt). Qu'Appelle: Common winter visitor; large flocks seen in February and March (Guernsey).

Mr. Hine tells me that this bird is very abundant about Winnipeg in the winter and spring. It is usually seen in the groves of soft maple, on whose seeds it feeds. Its note is like that of the Pine Grosbeak, but shriller, and resembles the syllables "*cheepy-teet.*" He says it is known by the name of Sociable Grosbeak, as it is always seen either in pairs or in small flocks.

This bird is an abundant winter visitor at Portage la Prairie, where the first generally appear about the 15th of October. From that date they continually increase in numbers until the 1st of December, when they reach the maximum. Whilst here they frequent the Northwest Maple or Box Alder, feeding on its seeds, and seldom visit the ground, except in spring, when they will sometimes crowd thickly on a bare spot, apparently seeking small gravel for digestive purposes.

During the winter they are usually to be seen in small parties, not exceeding six or eight in number, but early in April they congregate into large flocks, in which the males preponderate; they are then restless, frequently rising from the tops of the trees and flying about high in the air in circles over their haunts. They remain here until about May 16, when they all disappear together.

In view of the fact that this bird's nest has never been found, it may be worth noting that the Pine Grosbeak, its invariable associate in the winter, whose nest and breeding place is known, leaves here about the end of March, whilst the Evening Grosbeak remains in its winter quarters six weeks later, from which I would infer that it should not go so far from its winter haunts to nest as does the Pine Grosbeak.

On the 13th December, 1884, I saw a flock of these birds in the Riding Mountain, and observed them every day after that until the 20th, when I left. I did not find them nearly so common on the Red River as at Portage la Prairie. (Nash, in MSS.)

174. Pinicola enucleator. Pine Grosbeak.

Somewhat common winter visitant; possibly nesting in the northern woods of spruce. Winnipeg: Winter visitor; tolerably common (Hine). Red River Valley: Rare and accidental near Winnipeg; plentiful in spruce east and north of Winnipeg (Hunter). Swamp Island: 1885; rare; migrant; seven observed November 6; last seen November 7 (Plunkett). The Pine Grosbeak was frequently seen on the Churchill River in the end of July, showing that it probably breeds in this region (Bell, 1880). Portage la Prairie: 1890; common winter visitor; arrives about the 1st of November, departs about the middle of March; feeds largely on the seeds of prairie plants projecting above the snow; ob-

served in the Riding Mountains, December, 1884 (Nash). Red Deer Lake, 1881 (Macoun). Carberry: Common winter visitor (Thompson). Brandon: January 24, 1883, and February 22 (Wood). Shell River: Winter visitor (Calcutt). Qu'Appelle: Common winter visitor; large flocks seen all winter (Guernsey). Severn House (Murray).

On November 9, 1882, among the eastern sand hills I shot a Pine Grosbeak which had perched on the top of a tall spruce tree; female; length 9½, extent 14; gizzard filled with what I took for spruce seeds. The bird was uttering a loud whistle from time to time.

On December 6, at the spruce bush, saw several Pine Grosbeaks flying singly or in twos and threes; they seemed to be feeding on the tops of the poplars. This was about sunset.

December 7, at the spruce bush in the morning, I shot a Pine Grosbeak, female, and saw a fine red male.

175. Carpodacus purpureus. Purple Finch.

Summer resident; in small numbers on Turtle Mountain during the latter part of July; doubtless breeds (Coues). Winnipeg: "Pine Finch," summer resident; tolerably common (Hine). Portage la Prairie: 1890; common summer resident; arrives about April 20, departs about October 15; contrary to my experience in Ontario, I find that here the full plumaged crimson males are the first to arrive (Nash). Swan Lake House: July 11, 1881; doubtless breeding (Macoun). Carlton House: May, 1827 (Richardson). Carberry: Tolerably common in spring; in fall at Portage la Prairie (Thompson). Shell River: 1885, first seen, one male, on April 30; next seen, four, on June 3; a transient visitor, passing north and not remaining any time or breeding (Calcutt).

On May 14, 1883, I shot an adult male Purple Finch in full song. Everywhere tinged with crimson except the belly, which was white, and the rump, which was yellow; even the gizzard and all its contents were stained a rich crimson. It had been feeding on poplar catkins.

176. Loxia curvirostra minor. American Crossbill. Red Crossbill.

Winter visitant; possibly also breeding. Winnipeg: Tolerably common (Hine). Red River Valley: Permanent resident; abundant in any spruce bush (Hunter). Saw one female that was taken at Gladstone in the fall of 1885 (Nash, 1890). Carberry: Winter visitant (Thompson). In Minnesota very abundant; breeding; I never saw it out of the pineries (Trippe).

In Manitoba I failed to detect its presence excepting during the winter and spring. It generally appears in the Carberry woods with the snow and thenceforth throughout the winter; it is common wherever there is plenty of spruce and tamarac, for the seeds of these are its favorite food.

177. Loxia leucoptera. White-winged Crossbill.

Winter visitant; possibly resident and breeding. Winnipeg: Tolerably common (Hine). Carberry: Winter visitor (Thompson). Severn House and Trout Lake Station (Murray).

On December 6, 1882, at the spruce bush, 35° below zero, shot three White-winged Crossbills out of small flock that was feeding on the cones of a tall spruce. These were all males.

178. Acanthis hornemanii exilipes. Hoary Red-poll.

Migrant and winter visitant. Winnipeg: Rare; winter visitors (Hine). Specimens taken at Carberry in the early winter from a flock of the *Acanthis linaria* (Thompson). *Linota borealis*, Severn House (Murray).

179. Acanthis linaria. Red-poll.

Abundant fall and winter visitant. Winnipeg: Tolerably common in the migration (Hine). Portage la Prairie: Abundant winter resident arrives about October 20; departs about May 1; observed in the Riding Mountains, December, 1884 (Nash). Carberry: Abundant in the fall migration (Thompson). Shell River: Winter visitor (Calcutt). Qu'Appelle: Common; arrives April 1 (Guernsey).

On October 25, 1882, saw a couple of red-polls about the barnyard. They were feeding on the cottony crests of the solidagos.

On November 3, shot three red-polls; one was a female, crimson on poll only; gizzard filled with various small seeds. These appear to be *Acanthis exilipes*.

On November 6, a flock of red-polls appeared and were feeding on the weeds near the barnyard.

180. Spinus tristis. American Goldfinch. Wild Canary.

Common summer resident. Noted only at Pembina (Coues). Winnipeg: Summer resident abundant (Hines). Oak Point: 1884, arrived; May 29 (Small). Portage la Prairie: 1890, arrives about May 25; common summer resident; departs about the end of September (Nash). Carberry: Common summer resident; abundant in August and September (Thompson). Shell River: 1885, first seen, one male, on May 24; next seen, two, June 3; is common all summer; breeds (Calcutt). Qu'Appelle: Tolerably common; summer resident. Arrives May 24; breeds (Guernsey).

September 9, 1884. The goldfinches are now going southward in large flocks. For the last month they have led a roving life in bands of both sexes; especially frequenting fireguards and old breakings, where there is usually a luxuriant growth of prairie sunflowers (*Gaillardia*), whose seed is a favorite food.

In Manitoba I have not noted the bird before the end of May. In

this country it finds neither thistles nor orchards, so it feeds largely on the seed of the prairie sunflower (*Rudbeckia hirta*) and Gaillardia (*G. pulchella*), and nests in the low poplars and oaks on the edges of the heavier timber.

About the end of August they gather into roving bands of both sexes and feast on the now abundant supply of sunflower seed; about the 10th of September they disappear.

181. Spinus pinus. Pine Siskin. Pine Linnet.

An irregular migrant. Winnipeg: During June it is found along the Red River in hundreds (Hine). 1890: Rare and irregular visitant; I saw two or three flocks near the Red River in September and October, 1886 (Nash). Carberry: Irregular spring and fall migrant; not common (Thompson). In Minnesota observed in great numbers in the fall; migrates south in winter (Trippe).

On December 5, 1883, at spruce bush, saw a large flock of small birds swoop on the top of a birch tree, then an instant later sweep off again and wheel off twittering into the woods. I took them for Pine Linnets.

182. Plectrophenax nivalis. Snow-flake. Snow Bunting. Snowbird.

Very abundant early spring; fall and winter residents. Winnipeg: Very abundant winter visitant; seen as late as June 10 (Hine). Red River Settlement in winter (Blakiston). Swampy Island: 1885, first seen, two, on April 4; next seen April 13; last seen May 1; is tolerably common in fall and spring; does not breed; first seen in fall, twenty, on October 12; after this it became common; 1886, first seen, eight, on March 29; bulk arrived April 8; last seen, April 18 (Plunkett). Shell Lake: 1885; winter visitor (Calcutt). Portage la Prairie: Abundant winter resident; arrives about October 10; departs usually about the middle of April (Nash). Manitoba House, 18th October, 1858, snowbirds were flying about the post in large flocks (Hind). Abundant on the prairies between Brandon and Fort Ellice in October, 1881 (Macoun). Carberry: Abundant from November 1 to April 30, or usually as long as there is any snow (Thompson). Qu'Appelle: Common winter visitor; leaves about May 10 (Guernsey). Severn House, Trout Lake Station: Only goes to the south when the snow becomes deep (Murray).

Dauphin Lake, October 7, 1858, snowbirds were seen for the first time during the afternoon. They came about our camp in large flocks, but they did not appear to have quite assumed their winter dress.

In Manitoba, perhaps more than in any of our southern provinces, the hardihood of this most hardy bird may best be seen. As soon as the snow falls the snowbird appears in force, and all winter long he continues to twitter cheerily about the cheerless outbuildings and forage among the litter of the barnyards. The snow comes deeper and the weather gets colder, till the thermometer seems settled to sleep away

down among the 20's below zero, and still the merry, rollicking snowbirds roost on the barn and twitter and enjoy life; laugh and grow fat they surely do. Many that I have taken at this season are like balls of butter, and the clouds of blinding, biting, stinging snow that career over the desolate plains seem no more to them than a summer zephyr. The winter aspect of the prairie is dreary enough to our eyes. But when the winter storm—the blizzard—arises, burying the land in snowdrifts and destroying life with a gale of wind chilled to 50 or 60 degrees below zero, it may well be wondered that the hardiest of animals are left alive, so terrible is the power of this overwhelming torrent of snow.

Then it may be asked, when the blizzard is over, was the snowbird out in all this? He was certainly not in; and yet he was in, for his enemy is his friend. The deadly snow saved him alive from itself; he was not killed, but buried. He had indeed descended into the grave to save his life, for like several other birds that brave the northern winter, he has learned to crouch during a snowstorm in some recess or hollow, and his warm, protecting counterpane is the snow.

It is said that no bird goes farther north than the Snow Bunting. With him, if with any, is the secret of the Pole. In that desolate land where higher beings can not live, the young snowbird is reared in peace, like a frail flower springing up in the very cave of death. The sentiment of the strange construction is fully illustrated by a sight recorded on Southampton Island, by Captain Lyons, the explorer. Cold and hunger had swept away a tribe of Esquimaux; their bodies lay about what was once a village; on the shore, half buried by the sand, was the the body of a child, and on its breast a snowbird had built its nest and was rearing its young.

These abundant winter birds arrive at Portage la Prairie about October 10; depart usually about the middle of April. Their movements being influenced greatly by the weather, so long as the ground is covered with snow they will remain, but as soon as the bare ground is visible they disappear.

A few pairs may remain to breed with us, for on the 23d of May, 1884, I surprised a pair of them drinking out of a tub in my garden. The day was very warm, and after they flew on the fence I noticed that they seemed oppressed with the heat; their beaks were held open as one sometimes sees our common birds holding theirs on hot days in August. On the 22d day of June I saw one of the same pair or another bird also in my garden eagerly hunting for food, but unfortunately I lost sight of it without tracing it to its nest, if it had one. (*Nash, in MSS.*)

183. Calcarius lapponicus. Lapland Longspur.

Very abundant spring and fall migrant wherever there is prairie or cleared country. Mouse River, October (Coues). Dufferin: Arrive before April 15 (Dawson). Winnipeg: Abundant migrant (Hine). Abundant at Rat Portage, October, 1886 (Thompson). Portage la Prairie: Common in the spring; sometimes abundant in autumn (Nash). Very common on the plain at Fort Pelly, and on the road between Fort Ellice and Brandon, during September and October (Macoun). Car-

berry: Enormously abundant in the spring, and less so in the fall migration; plains south of the Souris River; abundant in spring (Thompson). Cumberland House, late in May (Richardson). Trout Lake Station and Severn House (Murray).

On May 13, 1882, while crossing the Barren Plain south of the Souris River we met with immense hordes of longspurs, thousands and tens of thousands of them; flock after flock, or rather wave after wave, in the flood that seemed never entirely to cease passing over. On all sides, as far as the eye could reach, they were to be seen stretching away into dim distance, like swarms of bees or gnats. Each wave of the flood seemed to fly on low over the plains for a short distance, and then settle on the ground to run about and forage among the bunch grass while the next wave passed overhead. But, in all their flights and changes of front and pace, one thing was noticeable, they kept a steady onward movement to the north. They are chiefly of two kinds, the preponderating species, the Lap Longspurs, and the next in numbers, the Black-breasted or *C. ornatus*, and the last the Painted Longspurs, scarcely represented at all.

September 6, 1883. The fall flower, the gentian, has just come out in great numbers. As I crossed to a part of the prairie where I might see their exquisite blue in perfection, a small flock of longspurs rose from my feet, uttering a doleful whistle. Two sad signs these; both say plainly, summer is gone and fall is short and passing away. Even now these longspurs were flying from the frost, and as often as I put them up they flew, not haphazard, but before me, or over my head, always to the south; every move must help them in their journey to their winter home.

May 15, 1884: The Lap Longspurs are here again in thousands. High in the air they fly in long straggling flocks, all singing together, a thousand voices, a tornado of whistling. Over the prairie they go, on to the newly sown fields, and here the flock drops a feeler, a sort of anchor or pivot, around which the whole body swings; then lifting again their anchor they wheel about and perform two or three evolutions, again drop the anchor and at length form a dense close column, and ceasing whistling they swoop down to the field to forage. When sprung they rise in a dense body, but at once spread out and begin the merry whistling. It is a peculiar sound of multitudinous melody, but not loud, and in some respects like the sleigh-bell chorus of the blackbird.

In the heat of the day these birds may be seen sitting in long rows in the shadow of each post in the fence; as the sun moves around they keep edging along to avoid his rays. They do not seem to like the heat and no doubt will soon go.

May 16: Very warm, 87° in the shade. Saw on the prairie a strange bird that might have been a female longspur, excepting that it had no white on the tail that I could see.

May 17: Enormous flocks of longspurs are still to be seen about the

newly sown fields. The gizzards of those I opened were full of oats, wheat, buckwheat, and grass seed. There are two species, the Lap and the Painted Longspurs. Grangers, the farmers here call them indiscriminately. The merry chee-chupping of the Laps, and the sweet singing of the richly colored Painted Longspurs make a continuous melody, like the spring jingling of blackbirds, but with more of the tone of bobolinks. Both sing on the ground. None of the specimens taken showed any anatomical signs of sexual excitement, so that they probably go much farther north to breed.

About the middle of May every year the Lap Longspur comes to this country, associated with the chestnut-collared Painted Buntings, in enormous flocks, coming in May, just after the crops are in. They do a great deal of damage, picking up first the seed that is exposed and afterwards tearing it up when it begins to sprout. A large number that I shot about this time had their gizzards full of oats, wheat, hayseed, and buckwheat.

When in the fields they have a curious habit of squatting just behind some clod, and as their upper colors are nearly matched to the soil, they are not easily observed, nor will they move until you are within a few feet; they then run a few feet and squat again, unless closely followed so that they must fly.

When in the air they move in great straggling flocks, all whistling together, so there is a perfect tornado of song. Merrily they fly along to the new-sown fields; then the ragged flock drops a feeler, an anchor or a pivot round which the whole army wheels, and after performing two or three evolutions in close column, finally cease whistling and swoop onto the field to forage. When "sprung" they rise in a dense body, but soon at once spread out and begin the merry jingling, a sound of multitudinous melody somewhat like the noise of Blackbirds.

In the heat of the day (for we often have it over 80° F. during May, shade register) they may be seen sitting in the shadows of the fence posts, in each shadow a long group just the size of the post, and as the shadow moves they will edge round to avoid the sun.

As the middle of May passes the jingling music becomes louder and more vigorous. The effect of a large body of longspurs singing is somewhat similar to that of a small body of bobolinks. They (*pictus* and *lapponicus*) now sing both in the air and on the ground. The song of the *lapponicus* is like "*chce-chuppy chuppy*" repeated with short intervals; the *pictus* has a more pretentious song. The latter went north about the 20th of May, in 1884; the former remained until about the 1st of June.

They retire to the far northwest to breed, but return again during the last week of September. They remain on the stubble fields for about two weeks before migrating southward. Their numbers now are much less than in the spring migration, contrary to what might be expected.

184. Calcarius pictus. Smith's Longspur. Painted Longspur.

Abundant spring, but rare fall migrant; one in Smithsonian Institution from Pembina, September (Kennicott). Mouse River (Coues). Carberry: Extremely abundant; migrant; staying for about two weeks in spring, and returning for a few days in the fall (Thompson). Severn House: Seems scarcer than the others; Sir John Richardson mentions that he had only obtained one specimen; three have been sent to me (Murray).

May 13, 1882, on the plains south of the Souris River, a few Painted longspurs were observed with the immense flock of Lap Longspurs that are now passing northward.

May 17, 1884, Carberry: The Painted Longspurs are here now in enormous numbers, accompanying the Lap Longspurs. They sing a sweet continuous song while perching on a clod. To-day I went out to collect a few out of the vast flocks that are daily about the newly sown fields; northwest wind was blowing and I approached from the east, but I could not detect a bird on the ground, although I was springing them from my very feet at each step. They have a habit of squatting closely when approached, then springing up they fly off with undulating flight; and as during this it is not easy to collect the bird, I got no specimens until it occurred to me to go around and approach the flock from the west. As soon as I did so the whole field seemed alive with the longspurs; their gay bosoms were thickly speckling the dark earth for acres, and I had no difficulty in getting as many as I needed.

Although in full song I could detect no signs of amatory passion in these birds, so that no doubt they go very much farther north to breed.

185. Calcarius ornatus. Chestnut-collared Longspur. Black-breasted Longspur.

Common summer resident; local in distribution, many pairs sometimes affecting a limited area of dry prairie, while again for miles no more of the species are to be seen. Wonderfully abundant; breeding along the boundary from 20 miles west of Pembina Mountain to Montana (Coues). Winnipeg: Summer resident; abundant (Hine). Shoal Lake, May 16, 1887 (Christy). Portage la Prairie: 1890, a colony about 2 miles north of here (Nash). Breeding in numbers on the Souris Plain, between Brandon and the Brandon Hills and southwesterly, late in June and early in July, 1881 (Macoun). Great numbers south of the Souris on the Brandon Trail, a colony at Chater, and another in the Big Plain near Boggy Creek (Thompson).

May 15. Camp 30 miles south of the Souris, over the same monotonous rolling prairie, a succession of ridges with duck-ponds in the hollows between. The Black-breasted Longspurs are still very numerous, though much less so than they were two days ago, and are now mostly seen in pairs. The males are frequently seen to spread their pretty black and white wings and tails and rise in the air about 10 feet, where they

sing sweetly for a minute or so; then, having let off the ebullition of feeling that prompted the action, they drop to the ground to chase their mates, or to resume the more humble vocation of foraging, mouse-like, among the bunch grass. There seemed to be a vast colony of them breeding at this particular place, but after moving a few miles further on none at all were to be seen.

On June 2, 1884, on a barren ridge of the rolling prairie between Boggy Creek and Petrel, I found a colony of over a dozen pairs of Black-breasted Longspurs. I did not succeed in finding the nest, as my visit to the place was merely in passing through "per cart," but I was able to make a number of observations on their song and habits. I found them rather shy of allowing approach, but quite indisposed to cease whistling on account of the intrusion. I was surprised to see them frequently perch on low bushes and sing there, also on the ground; so that some ecstatic singer would perhaps start his song as he squatted on terra firma, then spring up, singing in the air, and finish the performance on some willow bush. The song was somewhat like that of a baywing, but with a more mellow warble and without the slurred notes. The accentuation I noted down from the bird's dictation, as follows: "*Weeo-weechup-e we-chipity-tr-r-r-r-r-r-r-r.*"

Specimens shot had their gizzards full of grass seed and small insects of all sorts, but chiefly coleoptera.

When sprung they had a habit of rising abruptly and flying with deep undulations for about 100 yards, when they would pitch down again. On going to the place they would be found to have run some distance, and would again spring from a totally unexpected quarter.

186. Poocætes gramineus confinis. Western Vesper Sparrow. Baywing.

Very abundant summer resident on the prairies. Breeds in abundance from Pembina westward along the boundary to the Rockies (Coues). A specimen from Red River Settlement in Smithsonian Institution (Blakiston). Winnipeg: Common summer resident (Hine). Portage la Prairie: Common summer resident; arrives about May 10 (Nash). Common on the prairies, from Brandon westward (Macoun). Carberry: Abundant summer resident; breeding also along all the trails in the prairie region towards Brandon and Fort Ellice. Shell River: Breeding (Thompson). Shell River: 1885, first seen, two, on April 29; is common all summer, and breeds here (Calcutt).

May 11, 1882: Traveling to-day on the old Brandon Trail. As we follow its windings over the sterile prairie about Fairview, large numbers of Vesper Sparrows are to be seen, running and hopping in and out among the tufts of bunch grass, or flitting just ahead of the horses, which they seem to think are pursuing them. This is the first time I have observed them, but they are in extraordinary numbers here.

On May 9, 1883, shot a Vesper Sparrow, singing at dusk; a male; length 6¼, extent 11; gizzard full of grass. In the evening, after

dusk, a strange small sparrow ran along the ground before me, uttering a long twittering song in a quiet, cheerful way. I expected a discovery, but found it was only my old friend the baywing. I subsequently heard this effusion a number of times; it is like a soft continuous whispering of extracts from his various other musical performances. It was a male; length 6¼, extent 11; gizzard full of grain.

On July 31, 1883, at Humphrey's Lake with M. C., we noted a small bird that rose in the air singing a song like that of the English Lark, but less powerful. It sang and soared to a height of about 40 feet, then sank again to the grass. After an eager pursuit it was secured and proved to be only a Vesper Sparrow.

On August 4, 1884, heard a sparrow making a continuous screeching noise. It proved a baywing. In its bill was a grasshopper, and its gizzard was full of insects. Three times this week have I heard the baywing singing its air song from aloft. These are the only occasions noted this year, and now the species is not singing its ordinary song at all. Last year, as near as I remember, it was the samely.

Like its eastern relative this bird has a habit of running and flying by turns on the path, or a few feet before one. I have watched the conceited little creature when it chanced to alight on the trail, just in front of a train of over a hundred emigrant wagons, that, with a great herd of cattle and a rabble of boys and dogs, under guidance of noisy drivers and mounted outriders, presented a most formidable array half a mile in length, and the little baywing kept hop-hopping along in front and watching back over his shoulder; or if the leader approached him too closely, he would take a short flight and continue on the trail hopping, and seem all along to say "Catch me if you can, you folks; you are following hard and I am much amused." Then when at last he left the trail and the crowd passed on, he seemed to congratulate himself on having outwitted them so cunningly; or it may possibly have been that he thought he was the leader of the whole train, for I have also seen him when the train turned off at forks flit across the narrow point of land and again resume his task of leadership, much after the fashion of modern newspapers and politicians that are supposed to be the leaders of public opinion.

Another peculiarity of the species is its fondness for a dust bath. It will squirm and rustle its plumage and splash about in a dust heap for half an hour at a time, evidently enjoying it hugely. On a small sandy spot by the house door I used daily to see from one to six baywings enjoying their dry wash, but very rarely any other species.

In some of its habits it presents a considerable difference to the eastern bird; being in my opinion a much more accomplished songster, although superior opportunities for studying this bird may have influenced my preference for its music.

During the months of July and August he ceases his usual vesper song, and vents his feelings in a loud, wild, lark-like chant, which is

poured forth as the bird rises high in the air. An English friend, on first hearing it exclaimed that it was the voice of a real skylark, but it proved shorter and weaker. The bird begins to sing as he leaves the prairie, and sings and soars till he has reached a height of 50 or 60 feet, when he again returns to earth.

This air song is not heard nearly as frequently as the common perching song is in its proper season, nor have I heard both at the same time of year. The perching song alone is heard during May and June, and again after the fall molt there is a renewal of the spring chantings—an aftermath of song—for the bird ceases his soaring lay and once more sings for the setting of the sun.

This has an interesting bearing on the theory that many species often become perforce air singers on betaking themselves to prairie life.

But the song that this species utters late in the day is its sweetest if not its supreme effort, at the time when the reddening sun is nearing the horizon when, as the prairie farmers say, it casts no shadow; when, in reality, the ground is all in shade of the low ridges to the west. A bird on the prairie is in that shadow, but on springing up in the air the ruddy glow falls on him as he faces the setting sun and renews the song he sang for his rising. So springs and sings the Meadow-lark and many other ground birds, and having vented their feelings in this last good-night, sink down into the night which is already on the ground. Then, as the sky darkens, the eastern colors become those of the west, and the east grows somber, the general acclamation dies away, but the Baywinged Bunting sings on cheerily as ever, and is commonly left to sing alone in the gloaming loud as in the daytime, but seeming twice as loud. The peaceful notes are poured forth till the whole prairie seems lulled by the sweetness of the strain. This is the vesper song—this is the Vesper Bird.

The little baywing (*Poœcetes gramineus*) is one of the most familiar of prairie birds, and nightly sings a subdued kind of vesper song as the sun goes down. Its most notable peculiarity, however, is its habit of flitting along a trail or pathway in front of an advancing wagon or person, alighting every few yards As it is but comparatively recent that there have been any human trails over the prairies, it seems probable that this proceeding is a relic of a habit acquired by the bird of flitting before the buffaloes along the paths made by those animals. (Christy.)

187. Ammodramus sandwichensis alaudinus. Western Savanna Sparrow.

Abundant summer resident on the prairies. Breeds in profusion from Pembina westward, along the boundary to the Rockies (Coues). One from Red River Settlement in Smithsonian Institution (Blakiston). Winnipeg: Summer resident; abundant (Hine). Portage la Prairie: Common summer resident (Nash). Red Deer River and Manitoba House (Macoun). Carberry: Abundant summer resident; breeding in all prairies near Rapid City, near Bartle, Silver Creek, Rat Portage, October (Thompson).

On June 18, 1882, within a few feet of a straw stack in the barnyard,

where horses and cattle are continually running about, I found the nest of a Savanna Sparrow, protected only by a tuft of prairie grass. It contained five eggs, and was composed of grass with a meager lining of horsehair, the whole being slightly sunk in the ground.

June 29, Rapid City: All this spring I have been puzzled by a peculiar simple little song that was uttered by a small insignificant-looking sparrow, which usually perched on the top of a low bush in a dry grassy locality. This afternoon I succeeded in shooting one of these birds in the very act, and was somewhat surprised to find that it was a Savanna Sparrow, a bird that I was otherwise very familiar with. The song is readily suggested in my mind by the phrase "*tship-e-tship-e-tship-e-scree-tship.*"

Soon after arriving it may be seen on nearly every little willow bush on the Big Plain, repeating its short ditty, with the simple earnestness that characterizes the Scrub Sparrows. Its voice is much sweeter than that of the Shattuck Bunting (*Spizella pallida*), but it must needs finish with the inevitable "buzz." The song is shaped somewhat like "*tship-e-tship-e-tship-e-scree-tship.*" This is uttered for hours together with untiring diligence, and yet withal a lack of improvement that would seem to explode the old adage, "Practice makes perfect."

This bird is remarkably shy, even in places where man is scarcely ever seen.

188. Ammodramus bairdii. Baird's Sparrow.

Abundant summer resident throughout the Assiniboine Valley, wherever there are alkaline flats. One of the commonest birds, and doubtless breeding along the boundary on the prairies westward of Pembina Mountain to Mouse River (Coues). Carberry, very rare; Fingerboard, rare; Shoal Lake, west, abundant; also at Birtle and Shell River (Thompson). A supposed specimen obtained at Moose Mountain, July 3, 1880 (Macoun).

On June 4, 1884, near Shoal Lake, west, shot a number of Baird's Buntings. They do not answer to Coues's description (1 Key). The crown is suffused with dull orange. Its song is very like that of a Savanna Sparrow. In many parts of the prairies west of Birtle there are low flat alkaline stretches sparsely covered with long wiry grass. Wherever the land is of this character Baird's Bunting is sure to be a prominent if not the prevailing species. It is now in full song, and its peculiar notes are to be heard on all sides. The song may be rendered *trick-e-trick-e-trik-eeeee-chiky-le-roit*, with a peculiar utterance that at once distinguishes it from the song of Savanna sparrows. Another type of song with this species is like *trick-e trick-e-trike-e t-r-r-r-r-r-r-r-r-r-r.*

June 22, Shell River country: Here the dry alkali bottoms are more frequent, and the bunting is numerous in proportion.

June 24, Shoal Lake: Baird's Sparrow is common about here, though

less so than at Birtle. On the Big Plain where there are no alkaline flats; I have noted it but once or twice. The general habits of this bird are much like those of the Savanna Sparrow. While singing it is usually perched on some tuft of grass, each foot grasping a number of stalks to furnish support. When discovered, it flits low over the flat and drops into the grass. A number of the specimens taken were rather larger than the measurements commonly given.

189. Ammodramus lecontei. Leconte's Sparrow.

Abundant summer resident of willow bottom-lands in the Assiniboine boundary near Mouse River (Coues). Near Winnipeg: "Sharp-tailed finch;" summer resident; tolerably common (Hine). Carberry: Abundant summer resident; breeding in willow sloughs and grassy flats; Fingerboard; West slope of Duck Mountain, abundant; breeding (Thompson). Portage la Prairie: Rare summer resident in the large grass marshes near Portage la Prairie; may perhaps occur in larger numbers than is supposed, as it skulks in rank herbage and is difficult to flush, even with good spaniels (Nash).

In the afternoon of June 26, 1882, while riding after the cattle through the scrubby bottom land that skirts the eastern slough, I started a small sparrow from its nest. I dismounted and almost immediately found it; it was by a willow bush, and although apparently on the ground it was raised 6 inches or more above the wet by a matted tangle of twigs and grass on which it was placed. It was composed entirely of fine grass, and contained three eggs. The old bird hurried with rustling flight into the willow thicket and continued flitting about or threading the mazes of the copse, and uttering from time to time their peculiar and characteristic "*tweete!*" which was of that ventriloquial ambiguity that makes it difficult to place unless the bird is in sight. I had no gun, and knew I would not again be in that region for weeks, so I took the nest and eggs, not knowing the importance of the find. One of the eggs is $\frac{3}{4}$ by $\frac{1}{2}$, was of a delicate pearly pink before, pure white after blowing—with a few spots of brownish-black towards the larger end. I afterwards became quite familiar with Leconte's Sparrow and am satisfied that it was the species whose nest I found on this occasion.—E. E. T., 1885.

This beautiful sparrow abounds in Manitoba wherever there are meadows that offer the right combination of willow scrub and sedgy grass.

About the 5th of May it returns to the Big Plain. At first it is seen creeping about among the red willow scrub and last year's sedge along by the sloughs, and uttering a peculiar "*tweete,*" whence I knew this species as the willow-tweet long ere I had heard of Leconte or of any scientific name for the bird. This note is one of these very thin, sharp sounds that are so misleading by their ventriloquial character that one does not know in what direction to look for the "tweeter." On first

seeing the species close at hand it strikes one as being much like a beautiful miniature of the Meadow-lark.

About the middle of May the male begins to "sing" on some low twig, projecting a little above the long grass on the slough. He takes his stand, grasping and keeping his perch with a fixity of manner that bespeaks immovable resolution. Presently he throws back his head, gapes his widest, and thus with bill pointing to the zenith, arduously laboring, he is delivered of a tiny, husky, double note "*reese-reese*," so thin a sound and so creaky that I believe it is usually attributed to a grasshopper, and yet he evidently toils hard and brings this forth with such unction that he is quite exhausted for a time and sits dejected until he recuperates, which he does in about ten seconds, and once again his little soul is huskily poured out and again exhausted nature asserts her claims, and he subsides once more for the ten seconds of needful rest; but the strain is too great to be kept up for any length of time, so after five or six rehearsals, from beginning to end without omission or abbreviation, he is in such a reduced condition that the notes are no longer audible at a distance of 20 feet. He now drops from his post of elevation to the lower world and devotes his energies to the accumulation of protoplasmic recuperation in the form of plant-lice, flies, and caterpillars.

It is interesting and amusing to compare the intense earnestness of the Scrub Sparrows in the utterance of their creaky notes with the cool, off-hand dash, the nonchalance of the Larks and Wood Thrushes when they are stirring hearts and echoes with their inimitable strains.

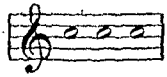
Another common note of this sparrow is a single, long-drawn "*bizz*," which also is deceptively like the sound of a grasshopper. This it repeats at intervals from some perch. When approached it drops into the long grass and threads about in the sedgy thicket like a Marsh Wren, although it is much less difficult to put up than that bird.

190. Chondestes grammacus. Lark Sparrow.

Common summer resident in vicinity of Winnipeg (Hine). Not noted elsewhere.

191. Zonotrichia querula. Harris's Sparrow.

Abundant spring and fall migrant, frequenting thickets. Mouse River, at boundary, September 19 to October 3 (Coues). Portage la Prairie: Common spring and autumn visitor; arriving about May 15, when they remain but a few days; reappear about September 20, departing about the 1st of October; whilst here they usually accompany the White-throated and White-crowned Sparrows, feeding in the rank weeds around the deserted half-breed claims (Nash). Fort Pelly: In flocks, 50 miles north of Brandon, west of the Assiniboine, on the road to Fort Ellice, October, 1881 (Macoun). Carberry: Abundant spring and fall migrant; Souris River (Thompson). Shell River: 1885, first seen, three, on May 15; a transient visitant; not breeding (Calcutt).

May 24: Black-hooded sparrows are here now in force. Many heard singing a bar like  one individual to this added a warble somewhat like that of a bluebird. The performance was disappointingly short, but the general impression gathered was, that whoever happens to hear the full song of the Hooded Sparrow will know one of the sweetest of bird melodies. During their spring visit the Blackhoods often uttered three clear whistling notes, and on one occasion a soft bluebird-like warble was added to this.

Soon after this date, May 24, they all disappeared as far north as the Duck Mountain; not one was to be seen in June. In the middle of October they once more return and abound for a few days. The young are now with them, but where hatched and under what circumstances is as yet entirely unknown.

192. Zonotrichia leucophrys. White-crowned Sparrow.

Migrant; probably breeding in the northeastern region. Winnipeg: Transient visitor; abundant (Hine). Oak Point: 1884; arrived May 5 (Small). Portage la Prairie: Tolerably common; spring and autumn visitor; arriving early in May; reappears about the 20th September; departs early in October; first seen, in 1884, May 15 (Nash). Carberry: Rare; spring and fall migrant (Thompson). It breeds in all parts of the fur countries, arriving in the middle of May and departing early in September to the northern parts of the United States, where it winters (Richardson). Common near Leaf River (Minnesota), where it breeds (Trippe). Severn House (Murray).

Cusa ba ta shish: White-crowned Bunting. * * *. These birds appear in May and retire southward before the cold begins; make a nest of grass and feathers in a bunch of willow or grass; lay four eggs and sometimes five, of a dusky cast; the young fly about the beginning of July; their flights are short. When on the wing they are silent, but when perched on an elevated spot set forth a most melodious song. They feed on insects and seeds of grass, etc. (Hutchins MSS., Observations on Hudson's Bay, 1782.)

193. Zonotrichia intermedia. Intermediate Sparrow.

Abundant at Mouse River, at the boundary, in middle of September (Coues).

194. Zonotrichia albicollis. White-throated Sparrow.

Common summer resident of woodlands. Winnipeg: Transient visitor; abundant (Hine). English River and Cumberland House: Nesting near Lake of the Woods, May 29 (Kennicott). Portage la Prairie: Abundant; spring and autumn visitor; arrives about May 15; reappears in great numbers early in September and remains until late in October; the last were seen by me October 31, 1884 (Nash). Very common around Lake Manitoba; breeding at Manitoba House June 15 (Macoun). Carberry: Common summer resident; breeding; Shell

River; Little Boggy Creek; Duck Mountain, breeding; Rat Portage, October (Thompson). Shell River: 1885, first seen, a pair, on May 6; next seen, twenty-one, on May 19; a transient visitant (Calcutt). East of Lake Winnipeg (on Nelson River), till September 15 (Blakiston). Cumberland House, June 4, 1827: A female sitting on seven eggs (Richardson).

July 6, 1882, Shell River: This evening our camp was on the edge of that yawning crack in the globe at the bottom of which runs the Shell. As I walked along the edge, watching the setting of a red-hot sun that was sinking amidst clouds of purple fire, a small bird flew up from the gray woods, now in deep shadow, to the antlers of a dead tree, in full glare of the sun, and stirred within me a hundred latent memories with a song I had not heard for years. For a minute or so he sang; then dived down into the woods, again to be heard faintly and seen no more.

This is a song I have been familiar with from childhood; but I have never seen the singer close at hand, and have found no one who could tell me its name. I am now satisfied that it is not, as I was told by one, the Golden-crowned Thrush. I could have shot the bird on this occasion and so have gratified my longing to know, but a gentler feeling restrained my hand until it was too late.

On June 19, 1883, I found the nest of the peabody while wandering with a young friend in a brush slashing wherein were still a few standing trees. In a more than usually open part a heavy black spruce and a bright silver birch were wrestling together like two giant athletes. About the feet of the wrestlers were beautiful spear shaped calla leaves in abundance, growing through masses of decomposed twigs—a tangle of the living and the dead—and from among these, in a drier spot, sprang the peabody's mate. The nest was a deep cup sunken in the ground among the black moss and decayed twigs. It was lined with black fibers, which made it more like its surroundings. The four eggs were mottled with a soft purplish gray.

October 7: Once more in the Shell River Gorge, where first in this country I heard the peabody. It was dark when we arrived, and a gloomy, cold autumn night. Except the rushing of the river and the hooting of an owl, the only sound is the soft whistling of the peabody.

This bird is so well known as a night singer that in many parts he is called the "nightingale," and I shall not be surprised to find that he also has an air song, and is therefore entitled to take rank as a singer of the first order.

May 15, 1884, heard a Peabody singing a song like this:



Oo che chim i naw ka maw ha sish. * * * This bird visits us in the spring and leaves us in the end of September. It feeds on flies and worms; builds a nest with

mud on the outside and straw or grass on the inside; makes choice of a situation in trees raised about a yard from the ground, and lays from two to five eggs, spotted with black. Also, "kaw sar bac ta pe tha shish" * * * This migratory bird is called the conjuring bird, because it begins singing just before the bad weather ceases, and forebodes an end of rain, etc., at which time its note is very clear, and seems to resemble the following words, "*twēet, twēet, tĭddlēlēt tĭddlēlēt, tĭddlēlēt,*" which it takes about a minute in singing. It makes its nest in willow, lays four eggs, brings forth its young about the middle of July. (Hutchins MSS., Observations on Hudson's Bay, 1782.)

In 1884 last seen by me at Portage la Prairie on October 31, feeding on the berries of the high bush cranberry (*Viburnum opulus*), there being 3 or 4 inches of snow on the ground at the time. These birds do not breed anywhere near either Portage la Prairie or Winnipeg. I looked for the birds very carefully each summer for 6 years but saw none. (Nash, in MSS.)

195. Spizella monticola. Tree Sparrow.

Abundant migrant; frequenting thickets; Mouse River, October (Coues). Dufferin: Arrived before April 15 (Dawson). Winnipeg: Summer resident; abundant; migrant (Hine). Portage la Prairie: Abundant spring and autumn visitor; arrives about April 10, remaining until about May 15; reappears about October 1, and departs about October 30, the last stragglers remaining until November 2 (Nash). Very abundant around brush on the plains in September (Macoun). Carberry: Very abundant spring and fall migrant; Rat Portage, abundant in October, 1886 (Thompson). Two Rivers: 1881, first seen, twenty, on March 23; next seen, April 6; migrant (Criddle). Shell River: 1885, first seen, fifty or more, on April 10; a transient visitant, passing north and not breeding or remaining any time (Calcutt). Lake Winnipeg (north end): September 24, 1857 (Blakiston). Severn House: This bird winters in the United States (Murray).

September 30, 1884: The Tree Sparrows are here again in flocks. The doleful spell is about beginning, but there is nothing doleful about the Tree Sparrows. Right merrily they chase each other from branch to branch on the leafless trees, twittering gleefully, and ever and anon, as they dash by in full career, bursts of their music may be heard, or perchance some member of the merry crew mounts a perch and lets us hear his full song—a song so sweet and varied that it is surprising to find his subgeneric brethren credited with nothing better than a prolonged twitter. It commonly frequents thick copses rather than trees, and its general habits would entitle it to be called Scrub Sparrow rather than Tree Sparrow. In the springtime it remains here long enough to let us hear its first attempt at a love song, then it disappears in the unknown north.

196. Spizella socialis. Chipping Sparrow.

One in Smithsonian Institution from Red River Settlement; also at Pembina (Blakiston). Winnipeg: Summer resident; tolerably common (Hine). Oak Point: 1884, arrived April 11; next seen on the 12th;

is common, and breeds here (Small). Portage la Prairie: Rare; summer resident; arrives about May 1 (Nash). Carberry: Rare; summer resident; breeding (Thompson). Qu'Appelle: Summer resident; breeds; arrives April 13 (Guernsey). Common in Minnesota (Trippe).

On June 6, 1884, found a nest (of chippy) at Portage la Prairie, containing three eggs. I have noticed that the song of this bird is in Manitoba different from that heard from the species in the East. (Nash, in MSS.)

This species is quite rare in Manitoba. The earliest record I have is April 10, 1882, but this was the only one seen at the time, and it was fully two weeks before others appeared. After the spring migration I lost sight of the species, but afterwards found it in full song at one or two places along the edge of the sand hills. It was seen only in three or four localities. These were generally dry, sunny openings on the edge of the woods. I found one nest in a low spruce tree, but I was too late, as the young birds had flown. The male bird is heard every morning in spring and early summer, uttering his characteristic, prolonged twitter from some high perch near his chosen bush. Another note of this sparrow is a short "chip," which is so commonly heard that it has given rise to the ordinary name of the species. The nest is almost invariably lined with horse hair, whence the other common name, "Hair bird."

197. Spizella pallida. Clay-colored Sparrow. Ashy-nape.

Very abundant; summer resident on scrubby prairies and half open lowlands. Very numerous about Pembina; breeding; Turtle Mountain and Mouse River (Coues). Red River Settlement (C. A. Hubbard and D. Gunn). Shoal Lake: May 18, 1887 (Christy). Portage la Prairie: Very abundant summer resident (not at Winnipeg); arrives about May 10; departs about September 15 (Nash). Lake Manitoba and westward, June 16 and 25, 1881 (Macoun). Carberry: In all scrub lands; very abundant summer resident; breeding twice each season; Souris River; Fairview; near Fingerboard; near Rapid City; near Birtle; Binscarth; breeding everywhere; very abundant on west side of Duck Mountain (Thompson). Shell River: 1885, first seen on May 18; is common all summer, and breeds here; nest with four eggs found (Calcutt).

June 28, 1882. Trail 15 miles west of Fingerboard; in the evening shot a Clay-colored Sparrow. The species is very abundant about here, and its peculiar grasshopper-like notes are heard from every patch of dry scrub land.

June 29, Rapid City: All spring I have been puzzled by a singular lisping song that is uttered by a small sparrow which frequents scrubby localities. The song, if it may be so called, may be represented by the syllables "*scree, scree,*" sometimes repeated two or three times. I have at length shot one in the very act, and find that it is the Clay-colored Sparrow. This species is extremely abundant on the prairies from here to Carberry wherever there is any brushwood. Its usual occupation

seems to be to sit on some low twig and deliver itself of its husky notes every few seconds, with all the *empressement* of a full opera.

June 14, 1884, Duck Mountains: Our camp is in a bluff of low poplars and willows out in the prairie, which, however, is more or less scrubby. Here in the very early morning, before dawn, we are often awakened by the buzzing "*scree, scree*" of some near Ashy-nape, willing to be thought a nightingale. The species is remarkably abundant about here, so much so that I can easily find three or four nests of it in an hour or two.

On July 28, as I was writing by the window, a family of shattucks came rambling along, six in number, all young birds, colored like old ones, but streaked on the head and breast and tinged on the wings with a little chestnut. In the long weeds by the window they found a fine hunting ground and spent some time in hunting about, picking up a hundred things which I could not see at all. Now and then they would adopt the rôle of fly catcher, and one got badly scared by a great red butterfly that flew down beside him, but he soon recovered himself and turned the tables by attempting to turn butterfly catcher. Another member of the party was a Savanna Sparrow, who looked quite "bob-tailed" beside the Shattucks. The whole party continued rambling and foraging in this manner until at length they rambled out of sight. This seems to be the usual way for young birds to spend the last of their first season.

This small sparrow arrives in flocks about the 12th of May. Its small size and pale, ashy hue will generally identify it as it rambles over the scrubby parts of the prairie.

The song marking the pairing season begins to be heard towards the third week of May from a dozen points at once and ceases about the 10th of August. "Song" I call it for convenience, but it is the least musical of a number of indifferent performances and is much after the manner of Leconte's Sparrow. This bird mounts some perch and with head thrown back and with gaping beak utters a sound like a fly in a newspaper—"*scree-scree-scree*"—sometimes giving but one note and at other times, in the height of the season especially, repeating the dulcet five or six times. In the "intromission intervals" between performances, he sits immovably with the outward appearance and all the gravity of an uncommonly hard thinker.

The nest is usually finished by the last week in May, and at this time the males have such ample time for their music that the scrubby parts are resonant from dawn to dusk with their peculiar rasping "buzz."

The spot chosen for their home is mostly in a low bush, not more than a foot from the ground. As exception to this rule I have noted five nests on the ground and one or two at a height of 3 feet. It is a very slight structure, a good deal like that of a Chipping Sparrow, but composed entirely of grass. When compared with other tree nests it is conspicuously flimsy and light-colored, the latter effect being due to the

absence of the black fibrous roots so commonly used as lining. The eggs are among the most beautiful of any produced by the sparrows. When first the discoverer draws aside the brush and exposes the nest with its complement his feelings are as of finding an exquisite casket of jewels. Although this is one of the most common of our sparrows, and although on the scrubby plain between the Duck Mountain and the Assiniboine in early June, I could have found as many as four or five nests in an hour's walk, the treasure-trove feeling in connection with the eggs continues in full force.

I infer from the above and other observations that the Shattuck Bunting breeds twice, if not three times, each season with us. It leaves the "Big Plain" about the end of September.

198. Spizella pusilla. Field Sparrow.

Very rare summer resident. Red River Settlement: Breeding (D. Gunn). Winnipeg: Summer resident; tolerably common (Hine). Have seen it west of Winnipeg (R. H. Hunter). Qu'Appelle: Common summer resident; breeds; arrives April 15 (Guernsey).

199. Junco hyemalis. Slate-colored Junco.

Abundant migrant frequenting thickets and hillsides. Probably breeding in the Winnepegosis region, as it breeds in Minnesota (Trippe). Mouse River: At boundary in September; abundant (Coues). Dufferin: Arrived before April 15 (Dawson). Winnipeg: Transient visitor; abundant (Hine). Ossowa: Common migrant; 1885, first seen, two, April 7; next seen, April 16; became common April 20; went north about end of May (Wagner). Oak Point: 1885, first seen, April 3; next seen, April 4, when it became common; is common and breeds here (Small). Portage la Prairie: Abundant spring and autumn visitor; arrives about the first week in April, reappears early in September, and remains until November; the last straggler I saw was on the 5th of that month; it is somewhat strange that I could never find any of these birds breeding here, as I have several times found their nests in the province of Ontario (Nash). Red Deer River and Assiniboine River, July, 1881; probably breeding (Macoun). Carberry: Very abundant migrant in spring and fall; never seen in summer; Rat Portage, abundant in October (Thompson). Two Rivers: 1884, April; 1885, first seen, three, on April 6; next seen, April 17; migrant (Criddle). Shell River: 1885, first seen, one, male, on April 3; next seen, thirteen, on April 15; became common on April 24; male and female in flock; a transient visitant, passing north and not breeding or remaining any time (Calcutt.)

Towards the end of April they became very abundant; about that time, in 1884, there was some severe weather, with a fresh fall of snow, and the Juncos disappeared; but May-day proved a beautiful morning, and every copse and log-pile seemed alive with them and their comrades, the Tree Sparrows, which appeared to come from their various

hiding places; both species at first uttered a little "peet" from time to time, but when the weather became warmer two songs were repeatedly heard from the flock; one a sweetly varied strain from the Tree Sparrow, the other a twittering something like the ditty of the hair-bird, but stronger and more bell-like in the tone. This is the song of the Junco; whether it has or has not a more ambitious refrain reserved for the far away secluded dells of its birth I can not yet say.

About the middle of May, all the Juncos and Tree Sparrows disappear; not one remains; all go to the far north to breed. Even in the Duck Mountain, I saw not a single specimen during the summer.

Towards the end of September these two species return to the Big Plain, in mixed flocks as before, and continue about for a week or two, but ready to fly at the first intimation of really cold weather or snow.

This is the only species of our common sparrows that, when adult, entirely discard the streaked plumage, and the fact is perhaps due to its choice of breeding locality, for it alone frequents wooded hillsides, while its near relations are all found nesting more or less in grassy places, where their streaked plumage affords them a means of concealment.

The Towhee exemplifies a similar specialization; as its adult plumage more nearly assimilates it to the leaf-strewn ground where it lives, than would the streaky plumage of its youth.

About the second week in September the snowbirds or Juncos (*Junco hyemalis*) began to become abundant about Carberry and remained so for at least a month. (Christy.)

200. Junco hyemalis shufeldti. Shufeldt's Junco.

This form accompanies *hyemalis* in the migrations at Carberry (Thompson).

201. Melospiza fasciata. Song Sparrow.

Summer resident; chiefly in woods along water courses. One specimen, Turtle Mountain (Coues). Winnipeg: Summer resident; abundant (Hine). Southern shore of Lake Winnipeg; breeding (Kennicott). Norway House (Bell, 1880). Oak Point: 1884, arrived April 11; 1885, first seen, one, on April 13; next seen on April 15; is common and breeds here (Small). Portage la Prairie: Common summer resident; arrives about April 6; departs October 1; December 30, 1885, I found one wintering about the stables on a farm at Burnside; he seemed very happy, and sang as if his surroundings suited him (Nash). Common at Lake Manitoba in 1881 and on the prairies in brushy places near water; nearly always fall in the water when shot (Macoun). Carberry: Scarce; summer resident; breeding; Portage la Prairie, more common; breeding west side of Duck Mountain; breeding, Rat Portage, in October (Thompson). Shell River: 1885, first seen, five, on April 18; seen every day afterwards, becoming common on April 28; common

summer resident, and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives April 1 to 5 (Guernsey).

July 22, 1884, Portage la Prairie: Found the nest of a Song Sparrow with four eggs. The bird, which I shot, seemed a very small specimen. The nest was, as usual, close by a running stream. Three of the eggs were hardset; one was fresh; the ground color of the three was pale greenish, of the last a delicate cream-color; after being blown the creamy became of the same color as the others; one measured $\frac{8}{16}$ by $\frac{12}{61}$; it was heavily spotted as usual; the rest were similar.

This habit of sitting before the clutch is all laid seems common in the Northwest. No doubt the necessity for saving the eggs from frost induces immediate sitting, so that the young inevitably often appear of different ages. (Cf. Kingbird, Vesper Bird, Robin, as well as Hawks and Owls.)

202. **Melospiza lincolni.** Lincoln's Sparrow.

Migrant in large numbers at the boundary on Mouse River, September 16, October 5 (Coues). Carberry: Rare spring and winter migrant (Thompson).

203. **Melospiza georgiana.** Swamp Sparrow.

Common summer resident; nesting in swamps that have some willows about them. Winnipeg: Summer resident; abundant (Hine). Oak Point: 1884, arrived April 24 (Small). Portage la Prairie: Abundant; summer resident; arrives about April 25; departs about 20th September (Nash). Mouse River, at the boundary, middle of September to second week of October (Coues). Carberry: Very abundant summer resident; breeding in every slough (Thompson). Qu'Appelle: Common summer resident; breeds; arrives September 18 (Guernsey).

To the Swamp Sparrows we are indebted no little for the merry twittering and the bustling signs of life about the brushy sloughs and reedy swamps of our country.

They delight in these damp thickets and may be seen continually scrambling around in the sedge and wet tangle or running on the floating reeds, holding "their skirts" very high, standing very high on their legs, with tails much raised, and otherwise showing great fear of getting wet. When they take wing, they flit over the water with rustling flight and tail rapidly pumping up and down; they usually make for the nearest bush or tussock, and then appear to tumble into it with nervous haste.

While flying and climbing about in the sedge, they often utter a short chirp, which is readily distinguishable when once heard, but can not be described in a way that would assist in its identification.

The commonest song of this species is a simple rapid, "*twet-twet-twet-twet-twet-twet-twet-twet-twet-twet-twet*," all in the same note and so

rapidly as to be almost a twitter. This is uttered at intervals from some dead branch projecting above the rest of the copse. If not disturbed the singer will sit quietly on this perch for an hour, repeating his ditty once or twice a minute, but if approached or alarmed he drops into the tangle, and so eludes both eye and gun. The bird is plentiful in the Northwest, and every willow-fringed slough is ringing with their song, so that I can not understand Dr. Coues writing "The song I have never heard."

Nuttall describes the song as a simple twitter, and this is not wrong; but it is long since I learnt to affix a note of interrogation to the statement commonly made of many of our passerine birds, "a simple twitter is its only note!" Something else is sure to turn up. Why, Wilson said that of the Vesper Bird! In the gloaming, after sundown on the 20th of May, 1884, I was strolling along the edge of a desolate-looking green and brown slough, when suddenly a small brown bird arose out of the sedge, singing in air so sweet and tender, yet strange, that I stood rapt. I never thought of shooting; soon the unknown melody was over and the air song finished with the familiar twitter of the Swamp Sparrow.

There was a time, not long gone by, when nearly all the birds were strangers to me, and whenever a new singer was heard or seen I felt something like a shudder, a perfect thrill of delight and anxiety. As I learned and knew them one by one, these extreme feelings came less often, for it was only a stranger that had such power to move, and on that evening, the first time for long, I was deeply moved by the voice of an unknown bird. Once or twice afterwards I thought I heard short bursts of song from the Marsh Wrens that sounded like fragments of the same strains, but I am inclined to think that the mysterious and delightful songster was the Swamp Sparrow, whose "only note is a simple twitter."

This song resembled the evening chant of a baywing, but was softer and possessed the charm of weirdness that might have been derived largely from the circumstances and surroundings.

204. Passerella iliaca. Fox Sparrow.

Migrant, not very common, breeding at Duck Mountain. Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Summer visitor, abundant (Hine). Portage la Prairie: Regular but not very common, spring and autumn visitor; arrives about April 22, reappears early in October, and departs at the end of the month (Nash). In woods on Duck Mountain, September 3; one shot at Livingstone September, 1881 (Macoun). Uncommon spring migrant at Carberry; abundant, breeding on the west side of Duck Mountain in June 1884 (Thompson). I observed it between Hudson's Bay and Lake Winnipeg (on Nelson River) in September (Blakiston).

June 19, 1884, Duck Mountain: The Fox Sparrow is quite common

here, and evidently breeding. Its loud ringing notes are to be heard on all sides among the timber on the mountain slopes and in the bluffs that dot the plain. Unfortunately, my efforts to find a nest were not successful. The habits of this fine bird exhibit much of the dash and style of the Wood Thrushes; it manifests a preference for the more open woods, and, when singing, is often perched on the top of some isolated tree.

205. Pipilo erythrophthalmus. Towhee.

Common summer resident in sheltered scrublands; not uncommon about Pembina, breeding (Coues). Winnipeg: Summer resident tolerably common (Hine). Northwest to Selkirk Settlement (Brewer). Oak Point, 1885: First seen, two on May 18, next seen on May 19; is common and breeds here (Small). Portage la Prairie: Common summer resident; arrives about June 1, departs about September 20 (Nash). Carberry: Common summer resident of dry, sheltered scrublands (Thompson).

On July 5, 1883, shot a Towhee female, length 8; the species is quite common along the dry, sunny, scrubby banks of the slough to the east. The common song is like "*Chuck-burr-pill a-will-a-will-a*," it has also a note like "*Twee* (not *Towhee*).

By August 30, the Towhee seems to have gone.

As Southern Manitoba is about the northmost region of this bird's distribution, full observations on its local habitat may result in conclusions of general interest on the subject, as the reasons for its choice of locality will probably be much more apparent than in its metropolis.

206. Pipilo maculatus arcticus. Arctic Towhee.

Along the parallel of 49 degrees this form becomes established, at least, as far east as the Mouse River, where I secured a specimen in September 16, 1873 (Dr. Coues).

207. Habia ludoviciana. Rose-breasted Grosbeak.

Common summer resident of thickets; breeding in abundance at Pembina (Coues). Winnipeg: Summer resident; abundant; found it as far north as Fairford (Hine), north to Selkirk Settlement (Brewer). Oak Point, 1884: Arrived March 26 (small). Portage la Prairie: Tolerably common summer resident, arrives about May 22. I found a nest June 7, containing two eggs; departs early, probably as soon as the young can fly; not found by me near Winnipeg (Nash). At Lake Manitoba and Red River abundant, probably breeding (Macoun). Carberry: Tolerably common summer resident (Thompson). Two Rivers, 1885: Saw one on May 25 (Criddle). Shell River 1885: First seen one male on May 14; seen every day afterwards; is common all summer and breeds here (Calcutt).

On June 28, 1883, in a spruce thicket among the sandhills, I noticed a large black and white bird, singing a song somewhat like that of the Oriole. The song was strong and spirited; on my nearer approach, the

bird disappeared in a tangled thicket, whence at times he uttered a peculiar "*churk*," as he threaded its mazes. I managed, however, to get a good look at him, and found he was a Rose-breasted Grosbeak.

On July 17, near the mill in the spruce bush, I shot a Rose-breasted Grosbeak, male, length 8, extension 12½; stomach full of catapillars small insects, and seeds. The species is not uncommon here.

208. Calamospiza melanocorys. Lark Bunting. Buffalo Bird.

Probably Manitoban; rare, noted on Souris Plain and west to Cypress Hills (Macoun). Moorsejaw, Northwest Territory, July 18, 1884. Buffalo Birds quite common (Miller Christy).

(The first of the above records refers partly to the extreme southwest of Manitoba, and may entitle this bird to a place in our list—E. E. T).

209. Piranga erythromelas. Scarlet Tanager.

Rare summer resident in woodlands. Winnipeg: Accidental visitant at Fort Rouge, just across Main Street Bridge, I saw one specimen, a male, May 15, 1887, on the bank of Assiniboine River (Hine). North to Lake Winnipeg (Ridgway). "I saw one pair only about the 6th June, 1880, in township 13, range 1 east, where I camped for a day (it was the first and only time I had ever seen the birds, but my companion, Mr. Clementi-Smith, now of Brandon, who had lived several years in Ontario, told me he had seen several pairs on the shores of Lake Winnipeg), the pair were nesting when we saw them; they were within 20 feet of us for a couple of hours. Mr. Clementi had recognized their peculiar call, for half a mile before we saw them (R. H. Hunter). Qu'Appelle; occurs sometimes, but is rather rare (Guernsey). In Minnesota, common (Trippe).

210. Progne subis. Purple Martin.

Rare summer resident. Oak Point, 1884: Arrived May 19; scarce; 1885, first seen, one on May 17; next seen three on May 20; is common and breeds here (Small). Winnipeg: Summer resident tolerably common (Hine). Portage la Prairie: Scarce summer resident in 1884; first seen May 23; common since 1886; later and at Winnipeg (Nash). Lake Manitoba: Rare; one pair collected at Manitoba House (Macoun). Carberry: Rare, and not known to breed; Pembina River (Thompson). Two Rivers, 1885: First seen, two on May 26; next seen May 28, (Criddle). Turtle Mountain: Breeding (Coues). Shell River, 1885: First seen, one male on May 23; next seen, two more same day; not breeding, transient visitant only (Calcutt).

On May 18, 1882, at Pembina River, near Plum Lake: Found one or two hollow oak trees in a thin, scraggy wood, along by the river, that were tenanted by half a dozen pairs of Purple Martins. The birds

were seen entering in by holes that had evidently been made by the Golden-winged Woodpecker.

Since 1886 common in Portage la Prairie and Winnipeg during their breeding season. The first I ever saw in the Province arrived at Portage la Prairie May 23rd, 1884. There were two, a male and female. These birds bred, and after bringing their young out of the nest remained until August 23, when they disappeared. On the 13th of May, 1885, several pairs arrived and bred, departing as soon as the young could fly. Since that they have increased greatly. (Nash in MSS).

211. **Petrochelidon lunifrons.** Cliff Swallow, House Swallow, Eave Swallow.

Very abundant summer resident. Nesting about buildings; most abundant of the family, breeding at Pembina, and along the line westward to the Rockies (Coues). Winnipeg: Summer resident; abundant (Hine). "House Swallow" Ossowa (Wagner). Oak Point, 1884: Arrived May 22 (Small). Portage la Prairie: Common summer resident; arrive about May 16; depart usually the first week in August; in 1884, first seen May 17, (Nash). Portage la Prairie: Common along the river banks nesting in great numbers in Little Souris and Qu'Appelle Rivers (Hine, 1858). All along rivers in the Northwest (Macoun). Carberry: Rare. Brandon: Abundant. Shoal Lake, west: Very common. Fort Ellice: Abundant. Assissipi: Very abundant; breeding (Thompson). Shell River, 1885: First seen, eighteen on May 23; afterwards seen every day; is common all summer and breeds here under eaves (Calcutt). Qu'Appelle: Summer resident, breeds; arrives about May 10 (Guernsey).

On May 25, 1882, at Brandon, under an 80-foot barn eave that faced the south, and stood by the river, I counted fifty-four nests of the Cliff Swallow and the remains or foundations of many more; many were bunched together in tiers, two or more deep.

On July 4, at Fort Ellice, on the Hudson's Bay Company's buildings along the river, are large numbers of Cliff Swallows' nests. All the higher buildings the Sheltered River Valley have numbers of them under the eaves, but none of the buildings on the hills, or at the elevated fort, are ornamented.

On June 4, 1884, near Shoal Lake, west, saw above thirty Cliff Swallows' nests under the eaves of a house that stood near a small lake. The birds had evidently been in possession of their nests for some time, as they were thoroughly repaired, but very few had begun to lay.

June 6. Assessipi: Although the carpenters have scarcely finished the new mill, and hotel, over three hundred pairs of Cliff Swallows have begun to build under the eaves. The noise of such an extensive colony is discernible at a great distance, and is not altogether considered pleasant by the townspeople. The remarkably favorable circumstances that have called this colony so soon into existence are high walls in a sheltered hollow, with a sunny exposure and proximity to a sheet of water.

Mr. George A. Blake, of Edmonton, has sent me a photograph, taken in Fort Saskatchewan, which shows about five hundred Cliff Swallows'

nests on a single gable; in some parts the ranks on this photograph are fifteen deep.

Although taking possession of their nests as soon as they arrive, these birds do not begin to lay until 2 weeks later. On the 4th of June I examined a number of these mud bottles on an empty house, a little beyond Shoal Lake, and was surprised to find that although all were tenanted very few as yet contained eggs, and most of these only one. All of these large colonies are placed noticeably near some lake or river, and an examination of the gizzard of one shot at this last mentioned place, showed it to contain, besides flies, a large number of water beetles, so that when the bird is seen low skimming over the water and dipping its bill from time to time, it is, beyond doubt, more often feeding than drinking.

About the 23d of August the Cliff Swallows may be seen leaving the Big Plain in flocks.

The cliff swallow had built its nests in great numbers on the banks of the river (Assiniboine, at Portage la Prairie), which rose about 16 feet above the level of the water. I counted no less than thirteen groups of them within a distance of 5 miles, when drifting down in a canoe. The cliff swallow was afterward seen in great numbers on the Little Souris, the south branch of the Saskatchewan, and the Qu'Appelle Rivers. (Hine, 1858.) The colonies are increasing yearly. They soon establish themselves in every small settlement that is built up and also about farm buildings. Arrive about May 16, depart as soon as the young can fly well, usually the first week in August (Nash, in MSS.).

212. **Chelidon erythrogaster.** Barn Swallow.

Very rare summer resident, Mouse River and various other points along the line (Coues). Winnipeg: Accidental visitant; rare (Hine). Portage la Prairie: Doubtful (Nash). Carberry: Rare spring visitant; arrived May 11, 1882, and May 4, 1884 (Thompson). Shell River, 1885: First seen, four, on May 30; transient visitants only; not breeding (Calcutt). Qu'Appelle: Summer resident; breeds; arrives about May 20 (Guernsey).

I recollect seeing a flock of swallows that tenanted a certain barn in Ontario leave en masse during a heavy thunder storm, and perch on a bare tree in the drenching rain, I suppose, for the sake of the bath. Has this any connection with the notion that swallow-tenanted barns are safe from lightning? The withdrawal of the swallows during the storm when some barn has been struck may have, by an ancient and honorable process of logic, given rise to the idea that the circumstances were cause and effect.

This bird does not occur near Portage la Prairie or Winnipeg. I once thought I saw one at the former place skim past my boat, but as the morning was very misty and I never saw another, I may be mistaken. (Nash, in MSS.)

213. **Tachycineta bicolor.** Tree Swallow. White-breasted Swallow.

Common summer resident of wooded regions; at Pembina breeding in small numbers (Coues). Winnipeg: Summer resident; abundant

(Hine). Oak Point, 1884: Arrived May 3, 1885; first seen, one, on April 28; next seen on May 6; is common and breeds here (Small). Portage la Prairie: Common summer resident in 1884; first seen April 27; arrives about April 20; departs early in August (Nash). Common along rivers in the Northwest, nesting in old hollow trees at Grand Valley (Macoun). Carberry: Common summer resident; breeding (Thompson). Qu' Appelle: Summer resident; breeds; arrives about May 10 (Guernsey).

On July 17, went to the White Horse Hill. Found a large colony of White-breasted Swallows nesting in the old Woodpeckers' holes, with which the timber is riddled, on the margin of the lake that lies north and east of the hill. This is the largest colony I have seen. It numbers, perhaps, twenty pairs. Nearly all of these settlements that I have noted have been close to a sheet of water. However, they are usually to be found wherever the timber is large enough to be hollow, and scarce enough to cast no gloom about the chosen district.

214. Clivicola riparia. Bank Swallow. Sand Martin.

Somewhat common summer resident; local in distribution. Pembina: Breeding in colonies, and along the line to the Rockies (Coues). Winnipeg: Summer resident; abundant (Hine). Portage la Prairie: Tolerably common; summer resident; arrive about May 22; depart about August 23 (Nash). Very abundant in the Northwest (Macoun). Portage la Prairie; Assinniboine, near Souris' Mouth; Yellowquills' Ferry (Thompson). Shell River, 1885: First seen, seventeen, on April 30; afterwards seen every day; is common all summer, and breeds here (Calcutt). Qu'Appelle: Summer resident; breeds; arrives about May 10 (Guernsey).

Shash y win o peshen (Martin). It resorts hither in the beginning of June; harbors about the steep banks of rivers, where it breeds in holes, making a slight nest of straw and feathers, and lays five white eggs. It is the latest breeder of the Hudson's Bay feathered tribes. I have repeatedly found new-laid eggs in the latter end of July, and by the middle of August not one of the Swallow species is to be seen. A few days before their disappearance they collect in numbers to particular ponds nigh Severn Settlement, and fly about along the surface of the water.

I have interrogated the natives who reside here, also those inland, concerning the Swallow being found torpid under water, but to no purpose; indeed, they laugh at my question. I agree with the learned Dr. Forster that Swallows may be under water unknown to the natives, as they don't examine under the ice in the winter; they, for the most part, angle for fish. (Hutchin's MSS., Observations on Hudson's Bay, 1782.)

These birds do not breed in colonies here, but excavate their holes in the bank of the Assiniboine River, singly, and some distance apart. They are late in nesting. On the 21st of July I took out a nest. It was quite new, but contained no eggs. I saw the old birds going in and out of the hole the day before, and just previous to my examining it. (Nash, in MSS.)

215. Ampelis garrulus. Bohemian Wax-wing.

Winnipeg: Winter visitant; tolerably common (Hine). I have seen these birds in this country in the month of April only (Hunter). Port-

age la Prairie: Regular but not a common winter visitor here; usually in April (Nash). Carberry: Winter visitant once noted (Thompson).

On November 23, 1886, saw a flock of about twenty Bohemian Chatterers, the only ones I have seen in the country. By a marvellous chance, I brought down one with the rifle without seriously injuring it, as the ball simply broke its back.

216. Ampelis cedrorum. Cedar Wax-wing. Cherry Bird.

Common summer resident of woodlands; Mouse River, near the Boundary (Coues). Winnipeg: Summer resident; abundant (Hine). Red River settlement (Blakiston). As far north as Lake Winnipeg (Ridgway). May 31, on an island on Winnipeg River, saw a large flock of fifty or more (Kennicott). Pennawa River (Hind., September, 1857). Ossowa: Common breeding; 1885, first seen one on May 15; next seen May 17; became common on May 19 (Wagner). Oak Point: 1884, arrived May 5; scarce (Small). Portage la Prairie: Abundant summer resident; in 1884, first seen June 2; arrives June 1, departs early in September (Nash). Abundant Manitoba (Macoun). Carberry: Tolerably common summer resident; Duck Mountain. Portage la Prairie (Thompson). Shell River: 1885, first seen five on June 5; is common all summer and breeds here (Calcutt). Qu'Appelle: Common; arrives May 22 (Guernsey).

On July 22, 1884, at Portage la Prairie, found the nest of a Cedar-bird in the woods near the river. It was placed on the branch of a low oak, and was much the same as specimen taken in the eastern provinces. It contained two fresh eggs, from which I infer that the species is a very late nester here. I do not think it arrives early enough in the season to raise two broods.

Its favorite haunts are the tops of the trees along the river banks, and from these it may be seen to launch out into the air every few seconds to capture some passing insect, returning to the perch each time to devour the dainty morsel.

This bird is a most expert fly catcher, hawking about over the rivers after a species of *Ephemera* that appears in July. When engaged in this pursuit they will remain on the wing for half an hour or more at a time, hovering and working to and fro over a space of 100 yards of water. Generally a good many of the birds are in the air at the same time, when the sight is a very pretty one (Nash in MSS).

217. Lanius borealis. Northern Shrike.

Tolerably common spring and fall visitant. Dufferin: Arrived before April 15 (Dawson). Winnipeg: Tolerably common (Hine). Portage la Prairie: Regular spring and fall migrant; in 1884, first seen April 11; heard of it two weeks before; arriving about April 10, remaining a short time, and returning about October 1; departing at the end of the month (Nash). Carberry: Tolerably common spring and fall visitant (Thompson). Arrives at Carberry April 7 (W. G. A.

Brodie). Shell River: 1885, first seen, one male, on March 14 (Calcutt). Touchwood Hills (Macoun). Between Hudson's Bay and Lake Winnipeg (on the Nelson River), September 17, 1857 (Blakiston). Trout Lake Station (Murray).

April 5, 1882: Snow 3 to 4 feet deep everywhere. In the woods to the east shot a splendid Northern Shrike. The vermiculations on its breast were almost obliterated. This was left on the roof of the shanty until I had time to skin it. While at dinner we observed another Shrike tearing at a bird on the snow, some yards away. On shooting it I found it was also a *borealis*; its breast fully pencilled; and the bird it was devouring was the other Shrike, which it had carried from the roof.

On October 23 a Shrike came careering around the stacks after an unfortunate Sparrow, which speedily took shelter under the litter. The Shrike hovered over it like a Kestrel, and then swooped. I now entered on the scene, and fired, but missed him. He, however, left the sparrow and dashed off with such an aristocratic air and graceful action that I almost felt I had been engaged in a very small piece of business in thus interfering in the private affairs of a gentleman.

Wa Paw Wisky John, or Great Ash-colored Butcher Bird of Pennant. This bird harbors at all seasons in the year a little distance inland and makes a shrieking noise. In April it builds a round nest of grass, straw, and feathers, neatly interwoven half way up a juniper or pine tree, and lays four light-blue colored eggs. Time of incubation, 15 days. (Hutchins' MSS.; Observations on Hudson Bay, 1782.)

218. **Lanius ludovicianus excubitorides.** White-rumped Shrike. Common Shrike.

Common summer resident of half-wooded districts; common breeding; Pembina and Turtle Mountain (Coues). Winnipeg: Summer resident; tolerably common (Hine). Shoal Lake May 15 and 20, 1887 (Christy). Carberry: Common summer resident; breeding (Thompson). Shell River: First seen, one male, March 14; next seen, one female, summer resident; breeds near my station (Calcutt). Qu'Appelle: Common; breeds (Guernsey).

On May 22, 1884, on a barb of the wire fence, I found a brown cricket firmly impaled. It was evidently not an accident, but the work of a Shrike, for as crickets are found only in August, this must have been in its present position for eight months.

On May 25, found a large yellow burying beetle (*Necrophagus*) impaled on a barb of a wire fence, no doubt by a Shrike.

On July 6, went with Gordon Wright and Miller Christy to the Big Slough on Pine Creek to see a spring that issues from a bed of petrified moss. Found two nests of the Common Shrike, the young of both broods being fledged and able to fly.

In November saw a number of grasshoppers impaled on the barbs of the wire fence, evidently this had been the work of Shrikes.

At least one species of Shrike is common and breeds, building its nest largely of the stalks of a species of *Gnaphalium* in the branches of the low, scrubby oaks that cover the sand-hills (Christy).

219. Vireo olivaceus. Red-eyed Vireo.

Abundant summer resident of woodlands: Abundant at Pembina, breeding (Coues). Northwest to Lake Winnipeg (Brewer). Winnipeg: Summer resident, tolerably common (Hine). Portage la Prairie: Common summer resident (Nash). Carberry: Abundant summer resident in woodlands, breeds (Thompson). Very abundant about Lake Manitoba, breeding (Macoun). Cumberland House, June 2, 1827 (Richardson).

On August 29, 1882, C. T. caught a Red-eyed Vireo down by the Slough. It was hurt in the wing, at least it seemed incapable of flight. It fought fiercely, biting at the fingers and snapping like an owl. When I laid it down, it threw itself on its back and fought like a hawk; on holding my finger towards it, it seized hold with its foot and allowed itself to be carried so. It seemed to have an insatiable appetite. It will eat as many dragon flies of the largest kind and as fast as we can catch them for it, and they are far from being a rare insect; six of the smaller kind it swallowed whole in rapid succession, the larger ones he holds to the perch with his foot, and breaks them up before swallowing. One of the latter was given to him alive and caused him some trouble; they had quite a struggle on the floor of the cage before he mastered it, for the dragon fly was nearly as long as himself.

August 31. The Vireo readily eats raw meat. His dietary to-day, includes three dozen house-flies, the entrails of a sparrow, six dragon flies, a couple of large grasshoppers, a couple of crickets, and the greater part of another sparrow.

September 1. Each day the Vireo disgorges a pellet of the indigestible part of its food. This is globular and about one quarter of an inch in diameter. This morning he devoured the entrails of a bobolink, a few crickets, and a number of naked caterpillars; the latter he readily eats, but he refuses to touch the hairy ones.

September 3. The Vireo is dead, it proved a male; length, $5\frac{7}{8}$; extent, $9\frac{1}{4}$. An examination showed clearly that in spite of the enormous meals it had daily made, it had died of starvation. The stomach was quite empty, the fat everywhere totally absorbed, and the breastbone nearly cutting the skin. From this we may form an idea of the enormous quantity of insect food gathered by this bird when at liberty and providing for its young as well as itself.

July 17, 1883. To-day the nest of a Red-eyed Vireo found June 27, contained one young one ready to fly, another but half grown, and an egg which was near being hatched. The nest was composed outwardly of wasp-nest paper. As usual with this species, the old birds did not appear to be much concerned about me. They hopped quietly about

the branches over my head, and evidently kept an eye on me, but to a careless glance they might appear to be merely climbing about in search of their prey.

It is difficult to describe the song of this species so that it will be recognized; but once heard it will be remembered, for no other bird keeps up such an incessant utterance of disconnected bars. During the whole of his serenade the Red-eye will sit motionless and fearlessly among the leaves within a few feet of one's head, and so often have my most earnest efforts to sight the voluable songster been frustrated under these circumstances that I begin to understand how the fable of the singing leaves may have originated.

220. Vireo philadelphicus. Philadelphia Vireo.

Summer resident of thickets. Summer resident; it undoubtedly breeds about Pembina (Coues). Winnipeg: Summer resident tolerably common (Hine). Shoal Lake; May 20, 1887 (Christy). West Slope of Duck Mountain breeding, nest found (Thompson).

On June 9, 1884, near Fort Pelly, on the upper Assiniboine I found a Vireo nesting in a small bluff of poplar and willow. The chosen site was in the twigs of a willow some 10 feet from the ground; the nest was the usual suspended cup formed of fine grass and strips of birch bark. On the ground immediately below it was another nest of precisely the same make and materials: intending to take this with me on my return I hung it in the tree, but when I came back I found it on the ground, it was again hung as before, and again thrown down, although it had been firmly attached to a twig. This happened several times so that there was little doubt that it was the Vireo's doing, but why? I can not imagine.

On June 13, the Vireo began to sit on her four eggs. I shot her and found her to correspond exactly with Coues' description of *philadelphicus*, except that the yellow on the breast was quite bright. The eggs closely resembled those of the Red-eyed Vireo, but were destroyed by an unfortunate accident before they were accurately measured. In its habits the bird exhibited the strange mixture of shyness and fearlessness, common to the family; she would continue on her nest while I watched her at a little distance, and when alarmed would quietly hop on a twig and then disappear in the foliage without uttering a complaint.

221. Vireo gilvus. Warbling Vireo.

Summer resident of woodlands; in abundance at Pembina (Coues). Winnipeg: Summer resident; tolerably common (Hine). Selkirk Settlements (Brower). Portage la Prairie: Common summer resident (Nash). Carberry: Common summer resident; south slope of Riding Mountain, west side of Duck Mountain (Thompson).

222. Vireo flavifrons. Yellow-throated Vireo.

Rare summer resident. Winnipeg: Rare; accidental visitor (Hine). July 18, 1884, Miller Christy brought me specimen of Yellow-throated Vireo from Moosejaw (Thompson).

223. Vireo solitarius. Blue-headed Vireo.

Rare summer resident; one secured at Pembina June 4 (Coues). Winnipeg: Rare (Hine). Long River: Duck Mountain; apparently breeding (Thompson).

On June 10, 1884, at Duck Mountain, a solitary Vireo was observed. It was uttering a note like *peechoeee*, somewhat like the call of a Goldfinch or a Linnet.

224. Mniotilta varia. Black-and-White Warbler or Creeper.

Pembina: June; probably breeds (Coues). Red River Valley: Summer resident; common (Hunter). Winnipeg: Summer resident; tolerably common; breeding (Hine). Portage la Prairie: Rare summer resident; arrives about May 15, departs in August (Nash). Waterhen River. Probably breeding; June 24, 1881 (Macoun). Rare at Cumberland House (Richardson). Carberry: Common in migration. Duck Mountain: Common; breeding (Thompson).

June 10, 1884, Duck Mountain: The Black-and-White Creeper is an abundant species in the spruce woods here; its note is a thin twitter, like a Cedar-bird in a hurry; it may be suggested by the syllables, "*Chipili, chipiti, chipiti, chipiti,*" uttered faster and faster till it becomes a mere twitter.

225. Helminthophila ruficapilla. Nashville Warbler.

Rather rare; summer resident of woodlands. Winnipeg: Summer resident; rare (Hine). Duck Mountain: Breeding (Thompson). Cumberland House: Male, May 15, 1827 (Richardson).

On June 11, 1884, at Duck Mountain, I found the Nashville Warbler in full song and evidently breeding. Its warble is something like that of the Summer Warbler, and may be rendered, "*Toit toit toit toit chip-it-e-ip-it-e ipitiipitipitipiti,*" the last part being a continuous twitter.

226. Helminthophila celata. Orange-crowned Warbler.

Common summer resident in woodland. Mouse River: Abundant at the boundary in September (Coues). Winnipeg: Summer resident; rare (Hine). Carberry: Common summer resident; breeding (Thompson).

On May 12, 1883, shot an Orange crowned Warbler. It was flitting about with great activity among the poplar catkins, and, from time to time, uttering aloud song like "*chip-e chip-e chip-e chip-e chip-e.*"

On May 14 I shot another Orange-crowned Warbler. Its song is much like that of the Chipping Sparrow, but more musical and in a higher key.

The bird is extremely restless and lively, moving about continually among the topmost twigs of the trees and uttering its little ditty about once in every half minute. I have noticed it in all the wooded sections near Carberry, and am disposed to believe that it breeds here.

227. **Helminthophila peregrina.** Tennessee Warbler.

Rare summer resident. Pembina: Common; migrating early in June (Coues). Winnipeg: Summer resident; abundant (Hine). Northern shore of Lake Winnipeg, June 6 (Kinnecott). Duck Mountains. Tolerably common; breeding. Carberry: Fall (Thompson). Cumberland House, May 28, 1827 (Richardson).

June 11, 1884, Duck Mountain: Tennessee Warbler is somewhat common. It usually frequents the heavy timber, and, in its activity and general habits, it presents the same features as the rest of the family. Its song begins with a note like *chipiti, chipiti*, repeated a dozen or more times, with increasing rapidity, then suddenly changed into a mere twitter.

June 12, Duck Mountain. Collected Tennessee Warbler; apparently breeding.

228. **Dendroica tigrina.** Cape May Warbler.

Common summer resident. Winnipeg: Summer resident; abundant along the river (Hine). North to Lake Winnipeg (Ridgway). Shoal Lake, May 16, 1887 (Christy).

229. **Dendroica æstiva.** Yellow Warbler. Spider Bird. Willow Warbler. Willow Wren.

Very abundant summer resident in thickets everywhere. Abundant, Pembina and Mouse River at the boundary (Coues). Winnipeg: Abundant; breeding (Hine). Shoal Lake, March 16, 1887; common (Christy). Ossowa: Common; breeding; 1885, first seen, one on May 18; next seen, May 19; became common, May 20 (Wagner). Oak Point, 1884: Arrived, May 26, 1885; first seen, one on May 16; next seen on May 23; is common and breeds here (Small). Portage la Prairie: Common summer resident; breeding; arrives about May 16; departs early in August (Nash). Common; breeding throughout the Winnipegosis region; the common species of Poplar brush. Lake Manitoba, June 15 to 20; Waterhen River, June 23 (Macoun). Shell River, 1885; first seen, three on May 15; afterwards seen every day; is common all summer, and breeds here (Calcutt). Qu'Appelle: Common summer resident (Guernsey). Carberry: Abundant summer resident. Breeding also in all wooded localities from Carberry to Fort Ellice (Thompson). Trout Lake Station: Sevory House; known throughout the whole of the fur countries (Murray).

June 3, 1884, Rapid City Trail: The numerous groves along the

trail here are vocal with the merry warble of the Yellow Warbler. It is one of the commonest birds of the district, and is to be found in all the poplar and dry willow clumps. A specimen collected was a male in full song and very rich plumage, in its stomach was a mass of various insects.

September 8th: Yellow Warblers are singing and going southward.

230. Dendroica coronata. Myrtle Warbler.

Abundant migrant; a few breed here; abundant in September; along Mouse River at the Boundary (Coues). Dufferin: Arrived between April 20 and 25 (Dawson). Winnipig: Summer resident; abundant north (Hine). Shoal Lake May 18, 1887 (Christy). Portage la Prairie: The most abundant Warbler we have, in spring and autumn, arrives about May 1, re-appears in August and departs about the end of September (Nash). Lake Manitoba, June (Macoun). Carberry: very abundant migrant; Souris River; Turtle Mountain; Portage la Prairie; breeding, common on Duck Mountain (Thompson). Shell River, 1885, first seen, ninteen, on April 30; afterwards seen every day in migration; a transient visitor, only passing north and not breeding (Calcutt). Cumberland, May 28, 1827; House (Richardson).

May 5, 1884: Flocks of male Myrtle birds have made their appearance. The bare branches of the yet leafless trees are enlivened by them everywhere, as they flit about in pursuit of the myriad insects, they look like small Flycatchers and the partial illusion is increased by the oft-repeated note, which is much like that of *Empidonax minimus*.

On June 10, Duck Mountain, shot a male Myrtle bird. The species evidently breeds here, its song is frequently heard in the spruce woods, it partakes of the same general character as that of other Warblers. It resembles the syllables, "*pheo pheo pheo pheo pheo pheo pheo, phew pheo, phew phee, phew phee, phew phee, phew phee, phew phee.*" The first part being uttered very rapidly, and the last with more deliberation.

September 12, Portage la Prairie: The town to-day is fairly flooded with Warblers in autumnal plumage, passing southward. Yellow-rumps constitute a very large proportion of the host that is making the return journey. Their ranks are now swelled by great numbers of the young, whose liveries are so various and often so very un-yellow-rump-like, that they may cause the beginner no little perplexity.

231. Dendroica maculosa. Magnolia Warbler.

Rare; migrant. Winnipeg: Summer resident; common (Hine). Found at Duck Bay, Lake Winnipegosis (Macoun). This is a common bird on the banks of the Saskatchewan: Cumberland House, May 26, 1827 (Richardson). Carberry: I observed a small flock, and secured a single specimen in young plumage, August 24, 1884 (Thompson).

232. Dendroica pensylvanica. Chestnut-sided Warbler.

Common summer resident in woodlands. Pembina: One female specimen, June (Coues). Winnipeg: Summer resident; abundant (Hine). Portage la Prairie: Tolerably common summer resident; arrives about May 30, departs in August (Nash). Lake of the Woods: May 29 (B. Ross). Carberry: Abundant in migration; commonly breeding; Duck Mountain, commonly breeding (Thompson). In Minnesota rather rare; breeds (Trippe).

On June 21, 1883, while at the spruce bush collecting, I heard the loud song of what proved to be the Chestnut-sided Warbler from a certain grove of tall poplars. The specimen collected was a male; length, 5; stomach full of small insects; evidently it was breeding. It is a true Warbler, being seen and heard continually among the trees. Its choice of locality usually causes it to be found chiefly in half-open woods, especially along the edges of low, marshy places. While singing I have always observed that it kept among the branches of the taller trees. Its song is somewhat like that of the Orange-crowned Warbler. I can recall it to mind by the aid of the syllables "*Chip-e, chip-e, chip-e, chip-e, chip e, wai chip,*" the single emphatic syllable near the end being the most tangible difference.

June 10, Duck Mountain: The Chestnut-sided Warbler is quite common in this wooded region, and is, no doubt, breeding here. It frequents the tops of the highest trees, and from time to time utters, with little variation, the already described song.

233. Dendroica castanea. Bay-breasted Warbler.

Rare; summer resident. Winnipeg: Summer resident; rare; found along the river (Hine). North to Hudson Bay (Ridgway). Portage la Prairie: Rather uncommon; summer resident; arrives about May 30 (Nash).

234. Dendroica striata. Blackpoll Warbler.

Rare; migrant; probably breeding. Winnipeg: Summer resident; tolerably common; probably breeding (Hine). Carberry: Rare; spring migrant; noted once only (Thompson). Cumberland House: May 25, 1827 (Richardson). Trout Lake (Murray).

235. Dendroica blackburniæ. Blackburnian Warbler.

Rare; summer resident. Winnipeg: Summer resident; tolerably common as far north as Big Island, Lake Winnipeg (Hine). Swan Lake and Porcupine Mountain: Probably breeding (Macoun). Carberry; June 3, 1883, saw a male Blackburnian Warbler to-day, the only one I have observed in the country (Thompson). "*Sylvicola parus,*" Severn House: Trout Lake Station (Murray).

236. Dendroica vigorsii. Pine Warbler.

Rare summer resident of the wooded country to the north and east. Winnipeg, Common (Hine). Tolerably common in eastern part of the province, where they appear about the end of May (R. H. Hunter). Duck Bay, Lake Winnipegosis, latter part of June (Macoun).

237. Dendroica palmarum. Palm Warbler. Redpoll Warbler.

Abundant migrant, on the prairies as well as in woods. Red River settlement (Brewer). Winnipeg: Abundant in migration (Hine). Carberry: Abundant migrant on the prairie, chiefly in spring, Portage la Prairie (Thompson). I saw only one individual at Cumberland House, May 26, 1827 (Richardson). Minnesota: Goes further north to breed (Trippe).

On May 14, 1883, I saw great numbers of Redpoll Warblers. They were in the bushes and also straggling all over the prairie; far from timber and not exactly in flocks. They are noisy, restless birds, and, as many observers have remarked, they are largely terrestrial, and have many of the habits of the Pipits. I collected three specimens.

It passes through this neighborhood and during the summer has not been seen. Yet from the facts that it is exceedingly common here and rare at Cumberland House one might almost infer that it breeds in the Duck and Porcupine Mountains.

238. Seiurus aurocapillus. Ovenbird.

Common summer resident of woodlands. Winnipeg: Summer resident; abundant (Hine). Breeding near English River, July 15 (Kennicott). Red River Valley: Summer resident; tolerably common (Hunter). Portage la Prairie: Tolerably common summer resident; arrives in May, departs in September (Nash). Abundant around Lake Manitoba; doubtless breeding (Macoun). Carberry: Tolerably common summer resident; breeding (Thompson). Cumberland House, June 2, 1827; breeds (Richardson).

In Manitoba my opportunities of observing this bird were very few, but since then, while resident in Ontario, I have been most advantageously situated for cultivating its acquaintance. I have in particular become very familiar with the famous air-song, so long a puzzle to the naturalists, that it utters in the evening while floating in the air above the tops of the forest trees. This song may be heard daily during the nesting season by those who know when and where to seek for it, and, so far from being unusual, it will be heard more often, even, than the ordinary "*teacher*" refrain, which seems to be but little more than a call note. One of the most interesting facts about this lark-like song is that it may be heard at almost any hour of the night in the grove where a pair of these birds have settled for the love season.

239. **Seiurus noveboracensis.** Water-thrush or Wagtail.

Summer resident along water-courses. Winnipeg: Summer resident; abundant (Hine). Red River Valley: Summer resident; tolerably common (Hunter). Around the lakes of the Northwest Territory (Macoun). Carberry: August, 1884 (Thompson). Severn House (Murray).

On August 9, 1884, at Humphreys Lake, I found the Water-wagtail very numerous for the first time, so that evidently the species is migrating. They were to be seen all along the margin skipping about over the floating rushes and bladderwort (utricularia), bobbing their tails and uttering their "*chit chit*" in a tone very like that of a Myrtlebird or Least Flycatcher. They are, however, even more noisy when in the trees. One specimen which I shot seemed as much annoyed by my intrusion as though it had a nest close at hand; this one was 6 inches long; stomach full of small insects.

240. **Geothlypis agilis.** Connecticut Warbler.

Somewhat common summer resident of tamarac swamps. Winnipeg: Rare (Hine). Carberry: Tolerably common; summer resident; nest found June 21, 1883. Duck Mountain: Tolerably common; probably breeding (Thompson).

On June 21, 1883, I found the nest and eggs of the Connecticut Warbler. On June 29, in the spruce bush, I shot a Connecticut Warbler, a male; length, 6 inches; stomach filled with insects; it haunted the tops of the low tamaracs and sang a song like "*Beecher-beecher-beecher-beecher.*"

June 14, 1884, Duck Mountain: One or two pairs of Connecticut Warblers are breeding in the tamarac swamp near here. Besides the song already recorded I have noted another type; it nearly resembled the syllables "*Fru-chapple fru-chapple fru-chapple whoit,*" and is uttered in a loud, ringing voice, quite unlike the weak, hurried lisping of the Wood Warblers, which are nesting abundantly in the adjoining dry spruce woods.

The life history of this graceful species has so long continued involved in obscurity that it is with exceptional pleasure I find myself enabled to cast light upon several of the most important of its habits. I had the good luck to find its nest, the first of the kind known to science. (This was subsequently sent with the bird to the Smithsonian Institution, where the identification was confirmed and the nest finally deposited.) The find was announced in the "Auk" (April, 1884, p. 192). I reproduce the article:

A few miles south of Carberry is a large spruce bush, and in the middle of it a wide tamarac swamp. This latter is a gray mossy bog, luxuriant only with pitcher plants and droseræ. Over its surface at regular intervals, as though planted by the hand of man, grow the slim, straight tamaracs, grizzled with moss, but not dense nor at all

crowded; their light leafage casts almost no shade, so that they always look as though just about to end, though the swamp really continues for miles the same dark-gray waste. I had often visited the bog when on exploring expeditions in the neighborhood, but seldom found any bird-life of special interest. On the day mentioned, while out collecting, I had braved the mosquitoes and traversed the bog for some distance, when beside the whistling croaks of the great crested and olive-sided Fly-catchers, usually the only bird voices of the place, my ear caught the clear song of a Warbler. It may be suggested by the syllables "*beecher-beecher beecher-beecher beecher-beecher-beecher.*" It was somewhat like the song of the Oven-bird, but different in being of the same pitch throughout instead of beginning in a whisper and increasing the emphasis and strength with each pair of notes to the last. Guided by the sound I found the bird high up in a tamarac. It was much less shy than the Wood Warblers, so that it was easily secured. It proved to be a male Connecticut Warbler.

As I went on a small bird sprang suddenly from one of the grave-like moss-mounds by my feet. It seemed distressed and ran along with its wings held up like a Plover just alighting. On seeing that I would not be decoyed away it returned and ran around me in the same attitude. Recognizing it as the Connecticut Warbler I stifled all feelings of pity, added the bird to my bag, and then sought out the nest in the moss. It was composed entirely of fine grass and sunken in the ground as already described. The eggs, four in number, measured .75 by .56 inch. Before being blown they were of a delicate creamy white, with a few spots of lilac, purple, brown, and black inclined to form a wreath about the large end. The creamy white ground color was replaced by white after the blowing process. The female was as follows; Length, 5⅝; stomach full, many coleoptera and one caterpillar; but little ash on head. Male, length, 6; head and breast clear ash, without brownish tints.

241. Geothlypis philadelphia. Mourning Warbler.

Common summer resident of dry scrub lands; breeding abundantly at Pembina (Coues). Winnipeg: Summer resident; abundant (Hine). Selkirk Settlement (D. Gunn). Very abundant at Waterhen River and Swan Lake; nest taken June 28, 1881, in a low bush of *Corylus rostrata*, about 4 feet from the ground (Macoun). Carberry: Common summer resident in the wooded thicket about the spruce bush; Duck Mountain (Thompson).

On June 22, 1883, while at the spruce bush, I shot a couple of Mourning Warblers. It is quite common here. I usually found this merriest of mourner frequenting dense, scrubby undergrowths on dry land, a choice of locality, which contrasts greatly with that of its near kinsman, the Maryland Yellowthroat. It is a very difficult bird to get sight of by following it. On one occasion I had been creeping and crawling about in a thicket for over an hour in a vain attempt to secure one of the many Mourning Warblers that were uttering their loud "*woichy woichy woichy woichy woi cha cha.*" Although I was often within 20 feet of a specimen I failed to obtain sight of a single one, until, at last, tired of this hide and seek game, I sat down on a log, resolving that if they would not wait for me to come to them, I would sit and wait for them to come to me. I then sat perfectly still for a few minutes. The simple warble was defiantly sounded in a near thicket a few times; then, as I did not move, the little bird suddenly flitted up to a higher post of observation within my view, and presently I put it in my basket.

242. **Geothlypis trichas.** Maryland Yellowthroat.

Common summer resident of damp thickets; Pembina and Turtle Mountains (Coues). Winnipeg: Summer resident; abundant (Hine). Shoal Lake: May 23, 1887, several seen, but not in a flock (Christy). Oak Point: 1884, arrived May 26 (Small). Portage la Prairie: Abundant; summer resident (Nash). At Waterhen River: Breeding; nest not on ground, but elevated a foot or two on the land, subject to floods (Macoun). Carberry: Common summer resident; Duck Mountain; abundant; breeding (Thompson).

On June 28, 1883, shot a Maryland Yellowthroat. Its song was like "*Rap-pittity rap-pittity, rap-pittity rap.*" The species is very abundant in the alder thickets along by the small lakes and ponds.

June 8, 1884, Duck Mountain: The Maryland Yellowthroat is an abundant species about here. Its favorite haunts are low, damp thickets, so that it is, in a measure, the complimentary species of the Mourning Warbler, which manifests a liking for none but the driest of copses.

Like the Mourning Warbler, also, it seems to take a mischievous delight in playing "Jack o' Lantern" to the collector, for it will lead one for hours through a maze of dank alders and water-willows, pausing, now and then, to encourage its distressed, mud-splashed, bramble-scratched follower, by calling loudly and plainly "*What a pity, what a pity, what a pity, pit,*" or again, when the persevering one has happened on some new accident, it announces its whereabouts in notes, which, by a slight stretch of the imagination, may be rendered "*What's the matter, what's the matter, what's the matter, mat.*" Often as has happened with myself the ardent collector will, at length, find that, after all his trouble, this black-masked "Will o' the wisp" has quietly left the neighborhood when it found the plot thickening too much for its amusement, and yet, all this time, perhaps, it has never once exposed itself to the eyes of the gunner.

To-day, while watching one of this species, I was surprised to see it suddenly spring up about 10 feet in the air, where, hanging poised, with its legs and tail dangling down, it uttered a prolonged and musical chant that lasted for nearly half a minute, then dived into the willows to take up the "*what a pity*" notes where it left off. But for the place, (the Upper Assiniboine,) and the plain view I had of the diminutive bird, I should have been sure that it was the Yellow-breasted Chat that had performed for my benefit, so nearly did the actions and voice of the Yellowthroat resemble those accredited to the droll Icteria. This song partook of the continuous and voluble character common to all air-songs, and due, it is supposed, to the vigorous motion of the wings reacting on the pneumatic system of the bird.

243. Sylvania pusilla. Wilson's Warbler. Black Capped Flycatcher.

Not common, chiefly as a migrant. Winnipeg: Summer resident; somewhat plentiful in spring and fall (Hine). Near Long River, May 21, 1882, saw a Black Capped Warbler (Thompson.)

244. Sylvania canadensis. Canadian Warbler.

Summer resident of wooded hillsides; north to Lake Winnipeg (Ridgway). At the head of Lake Winnipegosis, middle of July, 1881; not common; probably breeding (Macoun). Carberry: Rare; spring migrant (Thompson). Cumberland House: Male, June 6, 1827; from the time of year in which it was seen, we have no doubt of its breeding in that quarter (Richardson).

On June 3, 1883, I observed a Canadian Warbler in the woods to the eastward. This is my only Manitoban record. I append a note made in Ontario on this species in 1885.

Although this bird is not rare and has a wide breeding range in our own territory, its habits are not at all well known. I usually found it frequenting the bases and northern slopes of thickly wooded hillsides or alder thickets on the adjoining flats. Its song is loud and striking, and may be syllabically rendered "*rup-it che, rup-it-che, rup-it-chitt-it-lit.*" In the springtime it is heard hourly about its chosen localities, but after midsummer it is silent, having, I believe, no fall song period.

245. Setophaga ruticilla. American Redstart.

Common summer resident of that woods; very abundant at Pembina; breeds (Coues). Winnipeg: Summer resident; abundant (Hine). Common near Rainy Lake May 26, and near Lake Winnipeg June 6 (Kennicott). Shoal Lake, May 23, 1887 (Christy). Portage la Prairie: Common, chiefly in spring; summer resident; arrives about May 16; departs at the end of September (Nash). Very abundant around Lake Manitoba (Macoun). Carberry: Long River; Duck Mountain; breeding (Thompson). Shell River: 1885, male, first seen, one, on May 24; next seen, five, on June 2; first, female, May 26; next seen, three, on June 2; transient visitant, going north (Calcutt). Cumberland House: Male, May 20, 1827, and June 30, 1830 (Richardson).

June 8, 1884, Duck Mountain. Found the dainty nest and eggs of a yet more dainty Redstart in a low fork of a sapling. The mother bird seemed greatly distressed when she saw me approach her treasure. She flitted close to my head, and ran, beseechingly, on the ground at my feet, and "chipped" most plaintively. But midst all her grief she never ceased to catch flies whenever one of these tender morsels came within reach of her ready bill.

Ne-mis-cū Apethayshish * * * It derives its name from ne-mis-cū (thunder), because its note is heard but seldom except before thunder, which it therefore fore-

tells; plentiful inland in summer, but migrate southward in the winter; but I could not learn any more of its natural history, its not being known to the natives near the Albany Fort, where this specimen was shot. (Hutchins, MSS., observations on Hudson Bay, 1782.)

246. Anthus pensilvanicus. American Pipit, or Titlark.

Abundant spring and fall migrant. Winnipeg: Transient visitor; tolerably common (Hine). In considerable numbers along Mouse River in September (Coues). Portage la Prairie: Abundant; autumn visitor; I have not noted it in spring; arrives about September 20, and remains until the end of October (Nash). At Pelly: September 15, 1881 (Macoun). Carberry: Abundant; migrant; Turtle Mountain (Thompson).

October 8, 1884: Pipits are here in much greater numbers than in the spring, and are bustling about in the barnyards and pastures, first attracting notice by their untiring repetitions of the note "*chepit, chepit.*" Then, holding the attention by the remarkable habit they have of wagging the tail unceasingly, whether flying, perching, or running on the ground; they seem to be under some awful obligation to keep on wagging, not their tails only, but the whole of the latter end. The motion is absurdly excessive, and the birds look as though they would stop it if they could.

247. Anthus spragueii. Sprague's Pipit. Missouri Skylark.

Common summer resident of the elevated prairies of the south and west. Winnipeg: Rare (Hine). From Pembina Mountain westward along the boundary to the second crossing of the Mouse River; breeding in great numbers; Turtle Mountains, Mouse River, etc. (Coues). Carberry: Abundant; summer resident (Thompson).

On May 7, 1883, I noticed the Missouri Skylark, or Sky Jingler as we used to call it.

May 7, 1884: Have at last succeeded in collecting a skylark that I knew to have been singing aloft. It appears to be *Anthus spragueii* (identification subsequently indorsed by Dr. C. Hart Merriam). Male adult: Length, 6¼; weight, 3¼; tail, 2¼; beak, ⅜; toes, ⅞; hind toe, ⅞, of which claw is about half; toes reach beyond the tail; stomach full of coleoptera. It differs from Baird's description as follows: It has vibrissæ, the outer tail feathers not entirely white; the outer toe not quite free; first primary not longest, but second and third are; tail even, not emarginate; legs and bill not yellow, but flesh-colored. It is an extremely shy bird, and for long I confounded it with the shore-lark, whose song and habits on the wing are so similar.

On May 10, I counted twelve skylarks singing far up in the sky, during a 3-mile walk in the morning.

May 13. Skylarks very numerous now, and in full song.

On May 14, I watched a skylark that was singing on high with

great devotion; he had trilled his refrain from beginning to end a least twenty times when it occurred to me to time and count his songs. The whole of each trilling occupied 15 seconds, and after I began to count he repeated it from beginning to end eighty-two times; just as he should have entered on the eighty-third, his wings closed, his tail went up, and down he fell headlong; but my eyes were blinded with the brightness, and my neck refused to take part in further proceedings, so that I was not able to mark the bird for closer examination. This singer had serenaded me for about an hour, and I do not think he ranked above his fellows in staying power.

On May 19 collected a skylark that sang its song only twenty times before it dashed down to earth. Saw another singing on the ground; this is the only case of the kind I have observed. It is one of the commonest of prairie birds in western Manitoba. Its loud ventriloqual voice is heard from the clouds on all hands when it is in full song. This song was for long a riddle past my solving. I felt sure of its being the utterance of some bird on the prairie, but where, I could not tell nor trace; wherever I went, it seemed to be just a little further ahead, or to one side or another, or suddenly behind. Throughout the whole season of 1882 I was thus duped, and it was by chance that at last I found the singer to be away up in the sky, but so high that as it was a bright day it was impossible to follow with the eye the tiny speck whose music was shaking the air for thousands of feet around. The song is sweet and far-reaching, and both Audubon (the discoverer) and Dr. Coues (the further elucidator) have given most enthusiastic descriptions of its moving power and melody. When the skylark feels the impulse to sing, he rises from the bare prairie ridge with a peculiar bounding flight, like that of the pipit; up, in silence, higher and higher he goes, up, up, 100, 200, 300, 500 feet; then, feeling his spirits correspondingly elevated, he spreads his wings and tail and pours forth the strains that are making him famous. The song at the beginning is much like that of the English Skylark, and the notes are uttered deliberately but continuously, and soon increase in rapidity and force, till in a few seconds the climax is reached, after which they fade away in a veery-like strain, and then suddenly stop. While this was being sung the bird had floated downwards, and as soon as it is finished he proceeds, by the bounding flight, to regain his elevation and once more pour out his silvery strains.

Several times after a skylark had sung and returned to earth, with the headlong descent already described, I purposely flushed him, and at once he rose without further preamble, soberly remounted his imaginary 500-foot platform, and again sang his serenade from beginning to end. Thus on one occasion I called the same bird three times "before the curtain;" to the fourth *encore*, however, he would not respond, and each subsequent time that he was disturbed he would fly off some 200 yards and again settle on the prairie. Once only have I observed this species singing his full song on the ground.

248. Galeoscoptes carolinensis. Catbird.

Abundant summer resident of low thickets. Common in Red River region and westward along the boundary to Turtle Mountains; breeding (Coues). Winnipeg: Summer resident; abundant (Hine). North to Lake Winnipeg (Ridgway). Ossowo: Common; breeding; 1885, first seen, one, on May 26; next seen, May 27 (Wagner). Oak Point: 1884, arrived April 30 (?); 1885, first seen, one, on May 14; next seen, one, on 15th; is common and breeds here (Small). Portage la Prairie: Common; summer resident; arrives about May 22; departs about September 15 (Nash). Carberry: Abundant; summer resident; breeding; all thickets from Carberry to Birtle and north to Dark Mountain abundant; breeding; Long River (Thompson). Two Rivers: 1885, first seen, one, on May 25; next seen, one, on May 26; fairly common (Criddle). Common throughout the wooded country in the Northwest (Macoun). Shell River: 1885, first seen, one, male, on May 18; next seen, four, on May 24; is common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives about May 15 (Guernsey).

On June 22, 1882, I took the four eggs from the catbird nest found June 18; one measured $\frac{11}{16}$ by $\frac{15}{16}$ and is of a deep blue-green; the others are similar. The nest was made entirely of sticks and black fibrous roots, and was placed in the densest part of a willow thicket, thus giving us a pair of sooty birds building in a gloomy thicket a black nest to contain the brightest blue-green eggs that ever were laid!

The month of June, 1884, was spent in traveling with my brother, "per cart," in the country between Carberry and Coté's Reserve, near Fort Pelly. Throughout the whole of this region the catbird is an abundant species, and I had ample opportunities for studying the song of this bird, for it seemed at much pains to render itself the most conspicuous of the feathered population, while at the same time it strove with equal diligence to remain unseen. Each night we slept in some thicket of willows, and each morning we were awakened by an incessant scolding from a vituperative catbird, who continued to skulk about and mew and squeal, until at length the evident miscarriage of his purpose to remain unseen warned him that his wisest course entailed a speedy departure.

249. Harporhynchus rufus. Brown Thrasher, or Thrush.

Common summer resident of dry, partly open country. Pembina: Nesting (Coues). Winnipeg: Summer resident; tolerably common (Hine). On the flank of the Big Ridge, the Cinnamon Thrush (*Turdus rufus*) was noticed (Hine). Lake Winnipeg (Ridgway). Red River Valley: Summer resident; tolerably common (Hunter). Oak Point: 1884; arrived May 21 (Small). Tolerably common summer resident

near Portage la Prairie; abundant near Winnipeg; arrives about the middle of May, departs late in September (Nash). On the Portage la Prairie trail, east of Fairview "The Cinnamon Thrush is not uncommon among the sandy hills; we saw several during the day" (Hind, 1858).

Carberry: Common summer resident; breeding; Long River; Shoal Lake, west (Thompson). At Swan River; not common (Macoun). Shell River: 1885, first seen, one male, on May 23; next seen, two, on May 25; is common all summer and breeds here (Calcutt).

250. Troglodytes aëdon aztecus. Western House Wren. Common Wren.

Abundant summer resident in partly wood localities. Breeding very abundantly at Pembina in June; taken at Mouse River in September (Coues). Winnepeg: Summer resident; tolerably common (Hine). Ossowo: Common breeding; 1885, first seen, two, on May 18; next seen, May 19; became common, May 20 (Wagner). Oak Point: 1884, arrived May 17; 1885, first seen, one, on May 17; next seen, one, on May 18; is common and breeds here (Small). Portage la Prairie: Common summer resident; arrives about May 21; departs early in September (Nash). Carberry: Abundant summer resident; breeding; Duck Mountain breeding (Thompson). Manitoba House, June: Breeding; also at Waterhen River; frequent (Macoun). Shell River: 1885, first seen, a pair, on May 17; afterward seen every day; is common all summer, and breeds here (Calcutt). Qu'Appelle: Common summer resident; breeds; arrives May 12 (Guernsey).

On July 9, 1884, I found a nest of young wrens over a window of the ferry house on the Assiniboine. The old ones were laboring so incessantly to furnish them with food that I timed their journeys to ascertain the amount of attention required by the nestlings. The parents returned ten times in fifteen minutes, sometimes bringing only one insect, but usually with their bill full of them. Twice during that time they carried out dung in their bills, dropping it some 20 yards from the nest. At this rate the old ones would make not less than five hundred journeys each day. The time of observation was 6 o'clock in the evening. Mr. Kennicott ascertained that a pair of wrens carried to their young about one thousand insects in a single day; but this is perhaps below the mark, for the pair I have just mentioned often brought three or four insects at a time.

It is probable that two broods each season are raised by this species in Manitoba.

It will be seen that although this bird usually nests in a hollow stump, it is not averse to a different situation, provided only that it be a hole, and deep enough and narrow enough to exclude any but the owner. If the hole chance to be in the least a loose fit, his first care is to blockade the doorway with the largest twigs he can carry until he has reduced it to his own idea of snugness; and I learned to accept it

as the infallible doorplate of a wren's homestead when a bundle of twigs was seen projecting from a cranny in some decrepit-looking stump, a hollow rail, or a knot hole in an outhouse.

On one occasion I was told that a wren had built its nest in the pocket of a coat hung on the door of a ferryman's house on the Souris River. (Christy.)

My records of the nesting of this bird show that it is rather a late breeder here. In 1884 they are as follows: July 19, nest containing young well fledged; July 21, found nest containing young half fledged; August 5, another nest containing young nearly fledged. These nests were all built just under the top of the river bank. (Nash, in MSS.)

251. Troglodytes hiemalis. Winter Wren.

Summer resident in the thick woods to the eastward. Is common in the wood country east of Winnipeg during the summer months (R. H. Hunter). Portage la Prairie: Rare visitor; on May 16, 1885, I believe I saw this species in the woods near here; the bird was feeding on the ground, but when it saw me it disappeared in a large pile of old logs and brush, out of which my dogs could not drive it; on October 29, 1886, I identified it on the west bank of the Red River, about 5 miles south of Winnipeg (Nash).

252. Cistothorus stellaris. Short-billed Marsh Wren.

Summer resident of erratic distribution found in sloughs. Rather plentiful at Pembina; undoubtedly breeding (Coues). Winnipeg: Summer resident; rare (Hine). Red River Valley: Summer resident; rare (Hunter). Portage la Prairie: Rare; I have only taken it twice, October 3, 1884, near here, and October 7, 1886, about 7 miles south of Winnipeg (Nash). Carberry, south slope of Riding Mountain, north to near Coté's, abundant summer resident of the grassy (not the rushy) sloughs (Thompson). Qu'Appelle: Common summer resident; breeds; arrives May 15 (Guernsey).

Soon after the 1st of May every little sedgy pool and slough in the Assiniboine Valley, from Carberry to Pelly, is vocal with the merry chatter of this bird.

Its ordinary note is like two stones being struck together about a dozen times in succession; the first strokes with a slight pause between those following, with rapidly reduced interval until the last are all run into each other. It may be suggested by the following syllables: "*Chap — chap— chap– chap, chap, chap, chap p-p-p-r-r-r.*"

About the 6th or 7th of May it begins to sing a simple song, which naturally divides itself into three parts or bars: First, the "chappering" already described; second, in close connection a rather musical refrain of equal length, somewhat like the first half of the baywing's sunset song, but without its richness and with less of its power; and third, the "chappering" again from beginning to end. These call notes and songs may be heard on all sides for some time before a single

wren is espied, for they creep and scramble about like mice in the tangled herbage along the sloughs. Many a time I have marked one as it entered a small tussock and then, expecting to flush it, I have gone over and kicked the tussock in vain; the bird had slipped out at the other side, and was probably watching me from behind a rushroot a yard or two removed.

When singing, it is usually seen clinging to the side of some tall swinging reed, with its tail bent back so as to almost touch its head, thus exhibiting in a most exaggerated manner a characteristic attitude of all the wrens.

The nest is a globular structure, and judging by the one or two cases that I have observed is generally placed in a grass tuft. If there is any difference, I think the Short-billed selects a dryer situation for his home than the Long-billed Marsh Wren.

253. Cistothorus palustris. Long-billed Marsh Wren.

Summer resident of marshes. Winnipeg: Summer resident; tolerably common (Hine). Have noticed it from Selkirk to the Souris, particularly at Shoal Lake, north of Winnipeg, where they appear to be very common (Hunter). Oak Point: 1884, arrived May 15 (Small). Portage la Prairie: 1884, common summer resident (Nash). Abundant; breeding; at Winnipeg; at Waterhen River (Macoun). Never found at Carberry, or in any part of the Upper Assiniboine, so far as I know (Thompson).

254. Certhia familiaris americana. Brown Creeper.

Very rare; summer resident of woodlands. North to Red River Settlement (Ridgway). Winnipeg: Summer resident; rare (Hine).

255. Sitta carolinensis aculeata. Slender-billed Nuthatch.

Somewhat rare; summer resident of woodlands; its distribution seems to be much the same as that of the oak (*Q. macrocarpa*). Winnipeg: Summer resident; rare (Hine). Portage la Prairie: Common; chiefly in spring and fall (Nash). Carberry: Summer resident (W. G. A. Brodie). Rare in the spruce bush south of Carberry; seen in fall chiefly; Rat Portage in fall (Thompson). Was not an abundant species, but I brought home one specimen taken at Carberry in summer, 1883 (Christy).

On October 24, 1884, I was guided in the woods to a nuthatch by the sound of his hammering, which was so loud that I attributed it to the Hairy Woodpecker. I watched for a few seconds and found that he was busied "hatching" a hazlenut, which he had fixed in a crevice of the bark. Then I came near, whereupon the bird, fearing I should become troublesome, endeavored to take his nut and go elsewhere, but

it was so firmly fixed in the bark of the tree that I was within a few feet of him before it was extricated, and he flew off with it in his beak.

Common in spring and autumn near Portage la Prairie, appearing in the spring in large flocks about the end of April; in the autumn the broods come straggling back and disappear as soon as cold weather sets in; these are in all probability *S. carolinensis aculeata.*

On the 13th of December, 1884, and from then to the 20th, in the Riding Mountains I saw White-bellied Nuthatches every day; the weather was intensly cold, nearly 40° below zero; these were probably the typical form.

I did not see a single White-bellied Nuthatch of either variety in 1886 near Winnipeg. (Nash, in MSS.)

I can not concur that both forms of *Sitta carolinensis* are found in Manitoba; all that I have seen are nearer to *aculeata* than to the typical subspecies.—(E. E. T.)

256. **Sitta canadensis.** Red-breasted Nuthatch.

Very rare summer resident. Red River Settlement (D. Gunn). North to Lake Winnipeg (Ridgway). Winnipeg: Rare; summer resident (Hine). Portage la Prairie: Rare (Nash). Carberry: Once seen in May? (Thompson). In company with Black-cap Tit and Regulus on two occasions on the 26th of September, 1857, not far west of Lake Winnipeg, on the Lower Saskatchewan, a specimen preserved (Blakiston).

Mochic a nak a sish. This bird is a species of the titmouse genus; seldom visits the seacoasts, but are very plenty about 300 miles inland in summer, where it breeds, making an elegant nest in a tree, lays five to ten eggs; feeds on berries and insects from the tree; at the approach of winter it retreats to a more hospitable climate, which is contrary to the other titmouse, who are most numerous about the settlements in a severe cold winter. (Hutchins, MSS., Observations on Hudson's Bay, 1782.)

The first I saw flew into my house at Fort Rouge, near Winnipeg, about the 15th of August, 1886; some few days afterwards I saw one in the woods near the Red River, and on the 1st of September another bird came into my house and amused itself for some time by catching flies about the walls, regardless of the presence of my family. September 23 I saw another in the woods above mentioned, and on the 30th I saw a party of three near the river; of these I shot one, and so tame were they that the others did not fly or show the least alarm at the report of the gun. Shortly after this I saw another single one, the last of the season. None were ever seen by me near Portage la Prairie, or in fact anywhere but in the woods on the Red River, as before mentioned. (Nash, in MSS.)

257. **Parus atricapillus septentrionalis.** Long-tailed Chickadee.

Resident; abundant in wooded sections. The Manitoba bird is not strictly *septentrionalis*, but is nearer to that form than to *atricapillus*. Winnipeg: Resident; tolerably common (Hine). Lake Winnipeg (Kennicott). Winnipeg River: A female, that was about to lay her egg (B. Ross). Ossowa: Common resident (Wagner). Portage la Prairie: Resident, I believe; but although they are abundant during autumn,

winter, and spring, yet they disappear mysteriously during the summer months; I saw them in December, in the Riding Mountains (Nash). Carberry: Common resident in the woods to the south and east: Rat Portage, abundant in fall (Thompson). Very common in Northwest Territory, along our route (Macoun). Shell River: 1885, winter visitor (Calcutt.) Qu'Appelle: Common permanent resident; breeds (Guernsey).

258. Parus hudsonicus. Hudsonian Chickadee.

Found only in the north and east among the great coniferous forests. Permanent resident; common in the coniferous woods in the northern and eastern parts of Red River Valley (Hunter). In flocks around the Porcupine Mountains (Macoun). Seen and examined between Hudson Bay and Lake Winnipeg (on the Nelson River); did not find it between Norway House and Fort Carleton after leaving the thickly wooded country to the east of Lake Winnipeg.

259. Regulus satrapa. Golden-crowned Kinglet or Wren.

Very rare migrant; probably breeds. Winnipeg: Summer resident; rare; possibly breeding (Hine). Portage la Prairie: Very rare migrant; October, 19, 1886, I saw a flock of about fifteen near the junction of the Assiniboine with the Red River; they were very tame; these are all I ever saw in Manitoba (Nash). Carberry: November 5, 1884. While hunting in the sand hills to the south, to-day, I came across a flock of four Golden-crested Wrens; they were clambering about the tops of some low spruce trees, and uttering their peculiar "*streep, streep;*" this was nearly three weeks after the ground was covered with snow; this was the only occasion in which I met with the species in the province (Thompson).

260. Regulus calendula. Ruby-crowned Kinglet.

Tolerably common migrant. Mouse River in September (Coues). Dufferin: Arrived between April 15 and 20 (Dawson). Winnipeg: Summer resident; tolerably common (Hine). Portage la Prairie: Common spring and autumn visitor; arrives about April 20, reappears about the middle of September, and departs at the end of the month; the Ruby-crown has a very pretty song; in spring its volume is astonishing, when one considers the little body that produces it (Nash). Carberry: Common in spring migration (Thompson). Occasionally observed (between Norway House and Fort Carleton in autumn); specimens closely examined; gold crest not seen (Blakiston).

On May 12, 1883, while hunting along by the slough, I heard a loud-voiced warbler singing a song like *pie piee pi-ee heep-pi-che heep-pi che heep-pi-che heep-pi-che heep-pi-che heep-pi-che heep-pi-che.*" It began very softly, but soon rang out as loud and strong as a Canary. I managed

to shoot one, and was surprised to find it a Ruby-crowned Wren, for the volume of sound would have done credit to a much larger bird.

In its habits, as well as its food, this species closely resembles many of the wood warblers, so that it is difficult of identification when among the branches; but its peculiar nimbleness and its trick of playing and dashing after insects among the topmost twigs, together with its chick-a-dee-like manner of climbing about, will often cause its identity to be suspected, if these ways do not entirely distinguish it from the Mniotiltidæ.

261. Turdus fuscescens. Wilson's Thrush. Veery.

Abundant summer resident of thickets. Observed only in vicinity of Pembina; breeding in abundance during June (Coues). Red River Valley: Summer resident; tolerably common (Hunter). Selkirk and Red River (Gunn). Shoal Lake: May 20, 1887, seems to arrive on this date (Christy). Oak Point: 1884, arrived May 17; 1885, first seen, one, on May 3; next seen on May 5; is common and breeds here (Small). Portage la Prairie: Abundant summer resident; arrives April 23, departs at the end of September (Nash). Lake Manitoba and westward, nest found on the ground (Macoun). Carberry: Abundant summer resident; breeding; noted in all the willow thickets from Carberry along the south slope of the Riding Mountain, and north to Coté's Reservation (Thompson). Qu'Appelle: Tolerably common summer resident; arrives about May 20 (Guernsey).

On June 18, 1882, I heard again and again, the first time for the season, a song that has been familiar for years. I had always attributed it to a thrush, but now was able to identify the bird more exactly as the Tawny Thrush, or Veery. The song is a high-pitched whistle, yet rich and clear, with a rippling cadence like a little brook. It seems almost profane to represent this soft silvery tinkling by adopting uncouth syllables, yet I think the best idea of the mere articulation may be suggested by the syllables "*Veery, veery, veery, veery,*" from which, no doubt, the singer got his name.

261a. Turdus fuscescens salicicolus. Willow Thrush.

Taken on the Souris at the boundary, in the fall migration, September 16, by Dr. Coues. Recorded as *Turdus swainsoni.*

262. Turdus aliciæ. Gray-cheeked Thrush.

Migrant. Common migrant at Winnipeg (Hine). Migrant at Carberry (Thompson).

263. Turdus ustulatus swainsoni. Olive-backed Thrush.

Tolerably common summer resident. I am disposed to question all these records, as this bird is generally confounded with *T. aliciæ* (E. E. T). Winnipeg: Summer resident (Hine). Portage la Prairie: Rare;

summer resident; common in spring and autumn; arrives about April 27, re-appearing about September 15; departs early in October (Nash). Swan River and Moose Mountain: Breeding in rose thickets a few feet from the ground and in cornel bushes; eggs spotted (Macoun). Carberry: Summer resident; not very common; apparently breeding; Long River; Duck Mountain? (Thompson). Shell River: 1885, first seen, a pair, on April 30; is common all summer and breeds here (Calcutt).

264. Turdus aonalaschkæ pallasii. Hermit Thrush.

Common summer resident of woodlands. Winnipeg: Summer resident; abundant (Hine). I have noticed them at Kildonan, Selkirk, Brandon, and Fort Qu'Appelle; at the latter place they were nesting first week in June (Hunter). Portage la Prairie: Common summer resident; arrives about May 1; departs early in October (Nash). Lake Manitoba and west to Fort Pelly? (Macoun). South slope of Riding Mountain on Little Saskatchewan, August 28, 1858 (Hind). Shell River: First seen, two males, on April 18; a transient visitor, passing north and not remaining any time (Calcutt). Observed at Cumberland House on the 4th of October; I saw it several times, but had no gun (Blakiston).

265. Merula migratoria. American Robin.

Common summer resident in half open woods, etc.; breeding. In abundance at Pembina; breeding; in September, large numbers along Mouse River (Coues). Dufferin: Arrived in 1874 between April 15 and 20 (Dawson). Winnipeg: Summer resident; abundant (Hine). Red River Settlement, fourth week of April (Blakiston). Swamp Island: 1885, first seen, about thirty, on April 27, after which it was common, and it breeds here; in fall, last seen October 7; 1886, first seen, ten, on April 18; bulk arrived next day (Plunkett). Ossowa: Common; breeding; 1885, first seen, five, on April 18; next seen, April 20; became common April 25; last seen, one, on October 20 (Wagner). Oak Point: 1884, arrived, April 10; 1885, first seen, two, on April 8; next seen, April 9; afterwards common; breeds (Small). Portage la Prairie: Common; summer resident; arrives in April; my earliest spring record is April 3, 1885, when I saw a small flock; the latest is April 20, the bulk having then arrived; they frequently remain until after snow has fallen, feeding on the wild grapes and high-bush cranberries. The latest date I have is November 3, when I saw a large flock; the ground was then covered with snow (Nash). Abundant everywhere throughout the Northwest (Macoun). Carberry: Very abundant in spring migration; common summer resident; breeding (Thompson). Two Rivers: April 17, 1884; 1885; first seen, several, on April 16; next seen, April 17; became common April 20; is pretty common and breeds here (Criddle). Dalton: 1889, first seen, two, on April 12; became common on April 13; breeds here (Youmans). Bran-

don, April 20, 1882 (Wood). Shell River: 1885, first seen, two, on April 13; next seen, thirteen, on April 17; became common on April 24; male and female in flock; common all summer and breeds here (Calcutt). Qu'Appelle: Common summer resident; flocks of four or five about April 12 (Guernsey). Severn House, Trout Lake Station: The color is unusually bright in the specimens received (Murray).

On April 28, 1882, drove to the spruce brush; the country seems flooded with robins; the last mile of prairie, just before entering on the wooded and sand-hill region, was covered with an immense straggling flock. They were to be seen chiefly on the ground or making short flights. The general movement of the flock was northward. There must have been several thousands of birds in it.

On July 11, 1883, among the sand hills on the Portage Trail, I found a robin's nest; it was placed about 4 feet from the ground in a small isolated spruce, and contained three eggs which would have hatched within a week. This may have been a second brood.

Its song is first heard in the morning when the dawn is well advanced, the robin being more tardy to raise the matin song than many of his compeers. It is heard until the middle of the forenoon, then usually ceases until near sunset, when it recommences and continues until dusk. I have not yet noted this species singing by night. If when singing the bird be slightly startled by some noise close at hand, the loud cheery note is stopped, or at least altered, so that, although the song goes on, it is very faint and sounds as though coming from a great distance, and a close inspection will show the bird's bill to be shut. This was first pointed out to me by Dr. Brodie, but I have noted the same habit in several other species.

The loud rolling notes will remind Europeans of the voices of the Song Thrush and Blackbird, but there is a terminal bar of frequent occurrence that recalls the metallic notes of our own Wood Thrushes and reminds us of their near kinship to the Red-breasted Fifer (Toronto, 1885).

I have several times noticed that a nest containing young robins was lined with an inner coating of fibers, but can not say that this was added after the hatching of the young.

A friend informed me of a curious circumstance relative to a brood of this species. He had watched the old ones building in a silverbark or poplar, but shortly after the young were hatched he observed that the parents ceased to show themselves. After a little he climbed the tree and found in the nest the remains of the four young; nothing but the skins, all in shape with great staring eyes, but perfectly hollow and dried with the sun, while in and about them were hordes of ants, evidently the devourers if not the destroyers of the callow brood.

266. Sialia sialis. Bluebird. Blue-Robin.

Rare summer resident; chiefly about the large towns. Winnipeg: Rare summer visitor (Hine). Red River Valley: Summer resident; tolerably common; noted a number of nests last year, 1884, inside city

limits (Hunter). North to Lake Winnipeg (Ridgwgway). Oak Point: 1885, first seen, one, on May 24; next seen May 25; is comcommon and breeds here (Small). Portage la Prairie: Scarce; summer er resident; a few pairs seen each summer; near Winnipeg quite commcmon (Nash). Carberry: One record, a female with nest and eggs taken in in the south sand hills by my brother, Dr. A. S. Thompson, June 8, 18 1886 (Thompson). In Minnesota: Abundant; breeds (Trippe).

May, 1884, Portage la Prairie: I have a single obsbservation by Mr. C. W. Nash, which records the arrival of about forforty bluebirds at this place at this time. They arrived in the gray dowown. Afterwards, in the day light, a second flock descended from the uppoper air and joined the first. Both flocks were of both sexes. One infererrence from this is that the spring migration is performed at night. In thithe fall the flocks are often to be seen flying by day, at a considerable e elevation, while from time may be heard their warbling note, which, thohough it sounded so cheery in the springtime, now seems but a melancncholy reminder that the time of the singing of the birds is past.

A recent arrival, but which seems likely to become abundant as it i it is increasing fast. The first I ever saw arrived in a small flock just at daylight, MayMay 29, 1884. They hovered about for a time and then pitched down near my garderden at Portage la Prairie. As this place is fortunately not infested with those pespests, the bird collectors, they remained, and two pairs bred near me. These succescessfully carried off their broods.

May 22, 1885, more of them arrived and bred in the town.

May 3, 1886, quite a large flock arrived and spread themselves all all over the place.

Near Winnipeg they are also now quite common, but I can not saysay when they first appeared there. I saw none in that district previous to 1885.

They depart early in October, my latest record being of Octo ber 3 r 3 (Nash, in MSS.)

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